

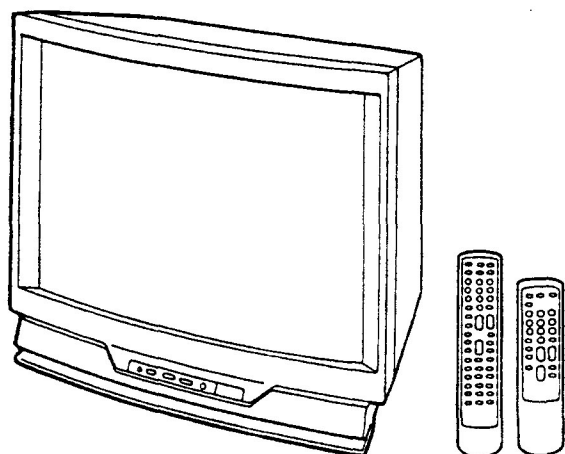
# KV-27TS29 / 27TS32 / 27TS36

RM-Y116      RM-Y117      RM-Y118

# KV-32TS36 / 32TS46

RM-Y118      RM-Y118  
SA-W200

## SERVICE MANUAL



### US Model

KV-27TS29 Chassis No. SCC-F84C-A

KV-27TS32 Chassis No. SCC-F84E-A

KV-27TS36 Chassis No. SCC-F84D-A

KV-32TS36 Chassis No. SCC-F84A-A

KV-32TS46 Chassis No. SCC-F84B-A

### Canadian Model

KV-27TS29 Chassis No. SCC-F85C-A

KV-27TS36 Chassis No. SCC-F85D-A

KV-32TS36 Chassis No. SCC-F85A-A

KV-32TS46 Chassis No. SCC-F85B-A

## AA-1 CHASSIS

### MODELS OF THE SAME SERIES

KV-27TS29/27TS32/27TS36

KV-32TS36 KV-29V15TR

KV-2970RS/2970M/2975M

### SPECIFICATIONS

**Television system** American TV standards

**Channel coverage** VHF: 2-13  
UHF: 14-69  
Cable TV: 1-125

**Picture tube** Hi-Black™ Trinitron® tube  
27-inch picture measured diagonally  
29-inch picture tube measured diagonally (KV-27TS29/27TS32/27TS36)  
32-inch picture measured diagonally  
34-inch picture tube measured diagonally (KV-32TS36/32TS46)

**Antenna** 75-ohm external antenna terminal for VHF/UHF

#### Input

#### VIDEO and S VIDEO

S VIDEO IN (S terminal)

Y: 1 Vp-p, 75-ohms unbalanced, sync negative

C: 0.286 Vp-p (Burst signal), 75-ohms

Video (phono jacks): 1 Vp-p, 75-ohms unbalanced, sync negative

Audio (phono jacks): 500 mVrms (100% modulation)  
Impedance: 47 kilohms

— Continued on next page —



# TRINITRON® COLOR TV

# SONY®



**KV-27TS29/27TS32/27TS36**  
 RM-Y116 RM-Y117 RM-Y118  
**KV-32TS36/32TS46**  
 RM-Y118 RM-Y118  
 SA-W200

**Output** AUDIO OUT (phono jacks)  
 More than 408 mVrms at the  
 maximum volume setting (variable)  
 More than 408 mVrms (fix)  
 Impedances: 5 kilohms

**Speaker output** 5 W x 2

**Audio frequency response** : FRONT 80Hz - 20kHz

**Power requirements** 120 V AC, 60 Hz

**Power consumption**

KV-27TS29	165 W
KV-27TS32	165 W
KV-27TS36	170 W
KV-32TS36	195 W
KV-32TS46	205 W

standby mode 5 W

**Dimensions/Weight**

	Dimensions (w/h/d)	Weight
KV-27TS29	661 x 603 x 522 mm (26 <sup>1</sup> / <sub>8</sub> x 23 <sup>3</sup> / <sub>4</sub> x 20 <sup>5</sup> / <sub>8</sub> in.)	45 kg (99 lbs 4 oz)
KV-27TS32	661 x 603 x 522 mm (26 <sup>1</sup> / <sub>8</sub> x 23 <sup>3</sup> / <sub>4</sub> x 20 <sup>5</sup> / <sub>8</sub> in.)	45 kg (99 lbs 4 oz)
KV-27TS36	661 x 603 x 522 mm (26 <sup>1</sup> / <sub>8</sub> x 23 <sup>3</sup> / <sub>4</sub> x 20 <sup>5</sup> / <sub>8</sub> in.)	45 kg (99 lbs 4 oz)
KV-32TS36	781 x 712 x 612 mm (30 <sup>3</sup> / <sub>4</sub> x 28 <sup>1</sup> / <sub>8</sub> x 24 <sup>1</sup> / <sub>8</sub> in.)	71 kg (156 lbs 9 oz)
KV-32TS46	781 x 712 x 612 mm (30 <sup>3</sup> / <sub>4</sub> x 28 <sup>1</sup> / <sub>8</sub> x 24 <sup>1</sup> / <sub>8</sub> in.)	71 kg (156 lbs 9 oz)

**Supplied accessories**

(KV-27TS29)  
 Remote Commander RM-Y116(1) with 2  
 size AA (R6) EVEREADY batteries  
 (KV-27TS32)  
 Remote Commander RM-Y117(1) with 1  
 size AA (R6) EVEREADY battery  
 (KV-27TS36/32TS36/32TS46)  
 Remote Commander RM-Y118(1) with 1  
 size AA (R6) EVEREADY battery  
 (KV-32TS46)  
 Active Super Woofer

**Recommended accessories**

U/V mixer EAC-66  
 Connecting cable  
 VMC-810S/820S, VMC-720M,  
 YC-15V/30V, RK-74A

Design and specifications are subject to change without  
 notice.

**WARNING!!**

AN ISOLATION TRANSFORMER SHOULD BE USED DURING ANY  
 SERVICE TO AVOID POSSIBLE SHOCK HAZARD, BECAUSE OF  
 LIVE CHASSIS.  
 THE CHASSIS OF THIS RECEIVER IS DIRECTLY CONNECTED TO  
 THE AC POWER LINE.

**SAFETY-RELATED COMPONENT WARNING !!**

COMPONENTS IDENTIFIED BY SHADING AND MARK  $\Delta$  ON THE  
 SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS  
 LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE  
 COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS  
 APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS  
 PUBLISHED BY SONY. CIRCUIT ADJUSTMENTS THAT ARE  
 CRITICAL TO SAFE OPERATION ARE IDENTIFIED IN THIS  
 MANUAL. FOLLOW THESE PROCEDURES WHENEVER CRIT-  
 ICAL COMPONENTS ARE REPLACED OR IMPROPER OPERA-  
 TION IS SUSPECTED.

**ATTENTION!!**

AFIN D'EVITER TOUT RISQUE D'ELECTROCUTION PROVENANT  
 D'UN CHÂSSIS SOUS TENSION, UN TRANSFORMATEUR  
 D'ISOLEMENT DOIT ETRE UTILISÉ LORS DE TOUT DÉPANNAGE.  
 LE CHÂSSIS DE CE RÉCEPTEUR EST DIRECTEMENT RACCORDÉ  
 À L'ALIMENTATION SECTEUR.

**ATTENTION AUX COMPOSANTS RELATIFS À LA  
 SÉCURITÉ!!**

LES COMPOSANTS IDENTIFIÉS PAR UNE TRAME ET PAR UNE  
 MAPQUE  $\Delta$  SUR LES SCHÉMAS DE PRINCIPE, LES VUES  
 EXPLOSÉES ET LES LISTES DE PIÈCES CONT D'UNE  
 IMPORTANCE CRITIQUE POUR LA SÉCURITÉ DU  
 FONCTIONNEMENT. NE LES REMPLACER QUE PAR DES  
 COMPOSANTS SONY DONT LE NUMÉRO DE PIÈCE EST INDIQUÉ  
 DANS LE PRÉSENT MANUEL OU DANS DES SUPPLÉMENTS  
 PUBLIÉS PAR SONY. LES RÉGLAGES DE CIRCUIT DONT  
 L'IMPORTANCE EST CRITIQUE POUR LA SÉCURITÉ DU  
 FONCTIONNEMENT SONT IDENTIFIÉS DANS LE PRÉSENT  
 MANUEL. SUIVRE CES PROCÉDURES LORS DE CHAQUE  
 REMPLACEMENT DE COMPOSANTS CRITIQUES, OU  
 LORSQU'UN MAUVAIS FONCTIONNEMENT EST SUSPECTÉ.

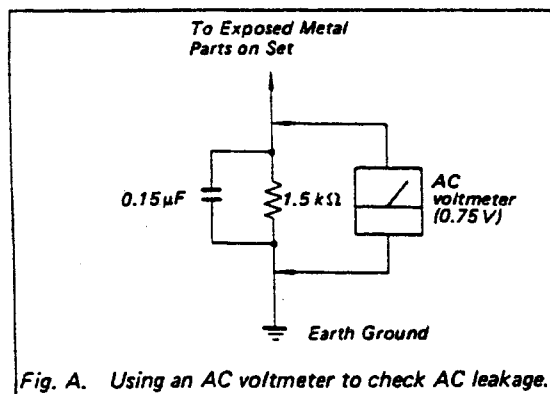


## SAFETY CHECK-OUT

(US Model only)

After correcting the original service problem, perform the following safety checks before releasing the set to the customer:

1. Check the area of your repair for unsoldered or poorly-soldered connections. Check the entire board surface for solder splashes and bridges.
2. Check the interboard wiring to ensure that no wires are "pinched" or contact high-wattage resistors.
3. Check that all control knobs, shields, covers, ground straps, and mounting hardware have been replaced. Be absolutely certain that you have replaced all the insulators.
4. Look for unauthorized replacement parts, particularly transistors, that were installed during a previous repair. Point them out to the customer and recommend their replacement.
5. Look for parts which, though functioning, show obvious signs of deterioration. Point them out to the customer and recommend their replacement.
6. Check the line cord for cracks and abrasion. Recommend the replacement of any such line cord to the customer.
7. Check the condition of the monopole antenna (if any).  
Make sure the end is not broken off, and has the plastic cap on it. Point out the danger of impalement on a broken antenna to the customer, and recommend the antenna's replacement.
8. Check the B+ and HV to see they are at the values specified. Make sure your instruments are accurate; be suspicious of your HV meter if sets always have low HV.
9. Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.



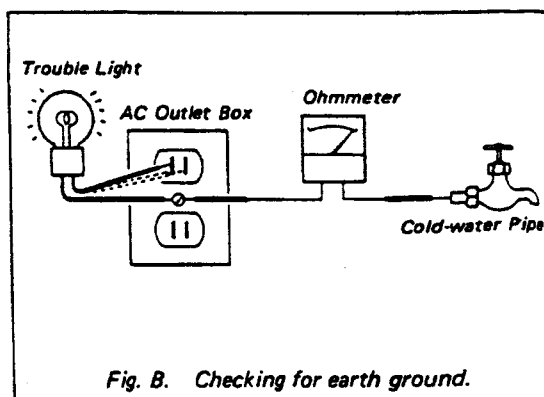
## LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microamperes). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2 V AC range are suitable. (See Fig. A)

## HOW TO FIND A GOOD EARTH GROUND

A cold-water pipe is guaranteed earth ground; the cover-plate retaining screw on most AC outlet boxes is also at earth ground. If the retaining screw is to be used as your earth-ground, verify that it is at ground by measuring the resistance between it and a cold-water pipe with an ohmmeter. The reading should be zero ohms. If a cold-water pipe is not accessible, connect a 60-100 watts trouble light (not a neon lamp) between the hot side of the receptacle and the retaining screw. Try both slots, if necessary, to locate the hot side of the line, the lamp should light at normal brilliance if the screw is at ground potential. (See Fig. B)





## TABLE OF CONTENTS

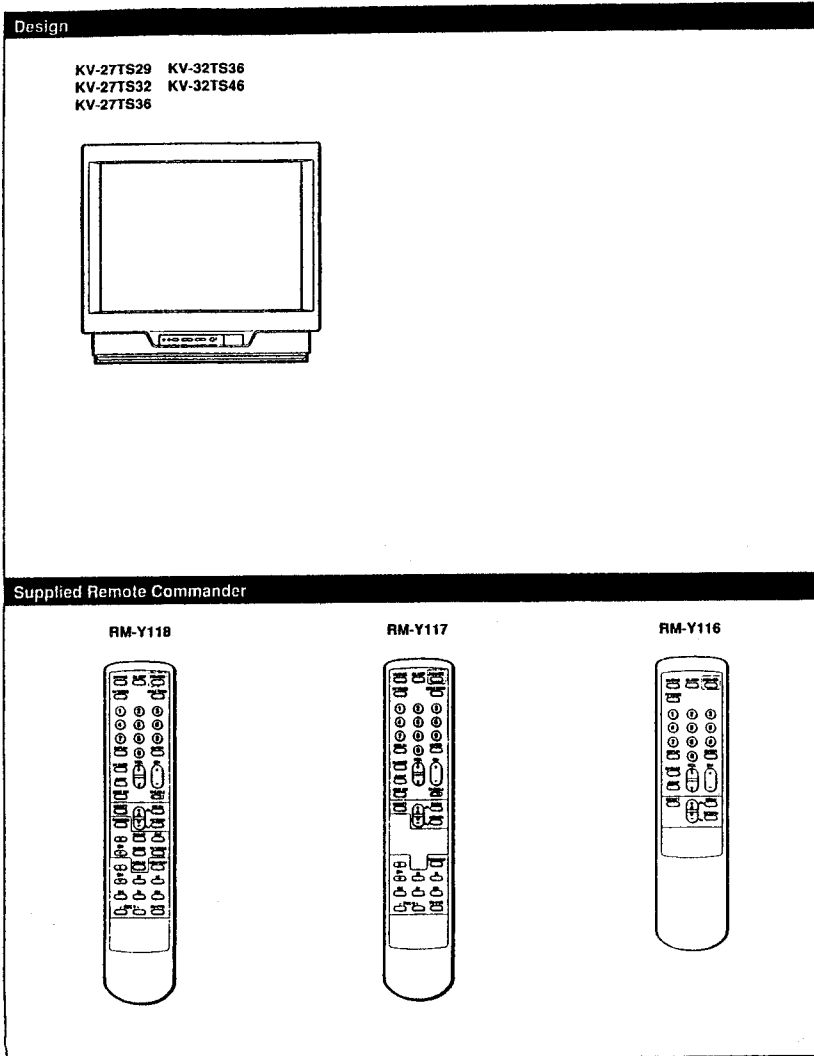
<u>Section</u>	<u>Title</u>	<u>Page</u>	<u>Section</u>	<u>Title</u>	<u>Page</u>
1.	GENERAL		4.	SAFETY RELATED ADJUSTMENTS .....	41
1-1.	Introducing the Sony TRINITRON® Color TV .....	5	5.	CIRCUIT ADJUSTMENTS	
1-2.	Locating the Controls .....	5	5-1.	Electrical Adjustment by Remote Commander .....	43
1-3.	Using the ON-SCREEN Menus .....	8	5-2.	M Board Adjustments .....	45
1-4.	Turning the Cable Mode ON or OFF .....	9	5-3.	P Board Adjustments .....	48
1-5.	Presetting TV Channels .....	10	6.	DIAGRAMS	
1-6.	Connecting Other Equipment .....	12	6-1.	Block Diagrams (1) .....	49
1-7.	Watching TV Programs .....	14		Block Diagrams (2) .....	51
1-8.	Using Convenient Features .....	15	6-2.	Frame Schematic Diagram .....	57
1-9.	Using Closed Caption (U.S.A. models only) .....	15	6-3.	Circuit Boards Location .....	61
1-10.	Watching two Pictures at Once (Picture-in-Picture) .....	16	6-4.	Printed Wiring Boards and Schematic Diagrams .....	61
1-11.	Using the Timer-Activated Functions .....	19		• A, C Boards .....	62
1-12.	Customizing the Screen Display .....	22		• UA Board .....	67
1-13.	Using the Pre-Programmed Remote Commander .....	24		• P Board .....	73
2.	DISASSEMBLY			• E Board .....	77
2-1.	Rear Cover Removal .....	26		• H Board .....	80
2-2.	Chassis Assy Removal .....	26		• M Board .....	81
2-3.	Service Position .....	26		• D Board .....	87
2-4.	P Board and P Bracket Removal .....	26		• Super woofer Board .....	94
2-5.	UA Board Removal .....	27	6-4.	Semiconductors .....	99
2-6.	Extension Cable .....	27	7.	EXPLODED VIEW	
2-7.	Picture Tube Removal (1)		7-1.	Chassis .....	101
	(KV-27TS36/27TS32/27TS29) .....	28	7-2.	Picture Tube .....	102
2-7.	Picture Tube Removal (2)		7-3.	Speaker (KV-32TS46 only) .....	103
	(KV-32TS46/32TS36) .....	28	8.	ELECTRICAL PARTS LIST .....	104
2-8.	Repair of Chip Component Circuit Board .....	30			
3.	SET-UP ADJUSTMENTS				
3-1.	Beam Landing .....	35			
3-2.	Convergence .....	36			
3-3.	Focus Adjustment .....	39			
3-4.	G2 (Screen) and White Balance Adjustment .....	40			



## SECTION 1 GENERAL

This section is extracted from  
instruction manual.

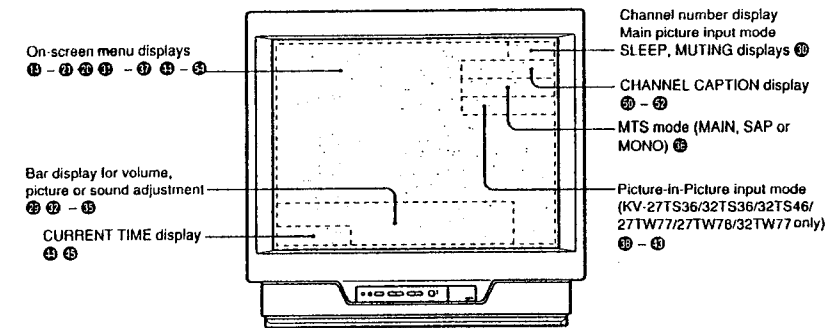
### 1-1. INTRODUCING THE SONY TRINITRON® COLOR TV



### 1-2. LOCATING THE CONTROLS

#### Screen Displays

For details, see the pages indicated by the numbered black circles ●.



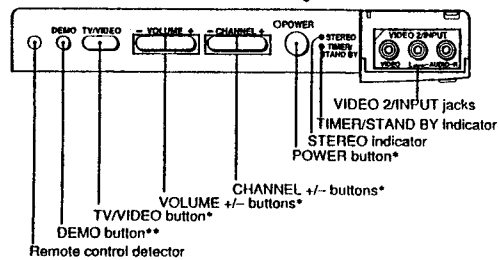
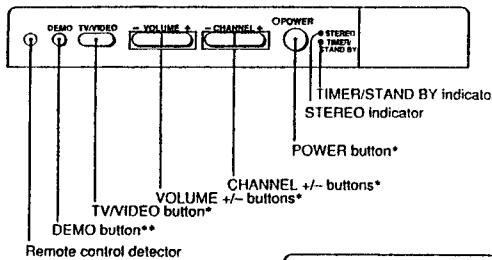
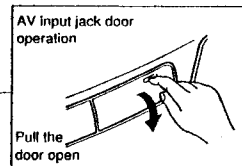
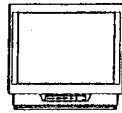
**KV-32TS36**  
(The screen displays, except for certain features  
as noted above, are the same for all models.)



## Front Panel

KV-27TS29

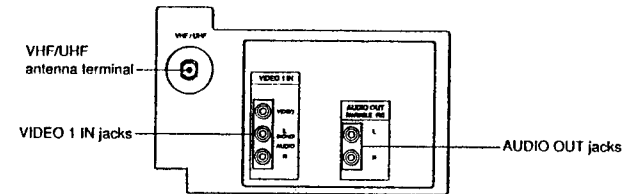
KV-27TS32 KV-27TS36  
KV-32TS36 KV-32TS46



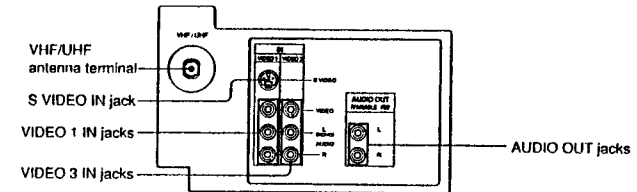
- \* Buttons with the same function are also located on the Remote Commander (pp. 10 - 11).
- \*\* If you press this button, functions and menus are displayed one by one. Press any button to stop DEMO.

## Rear Panel

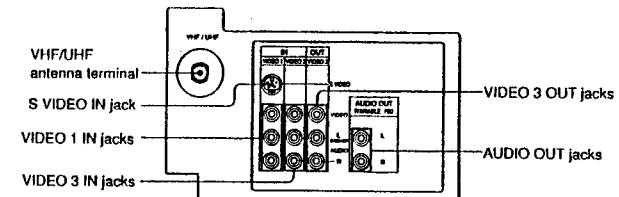
KV-27TS29



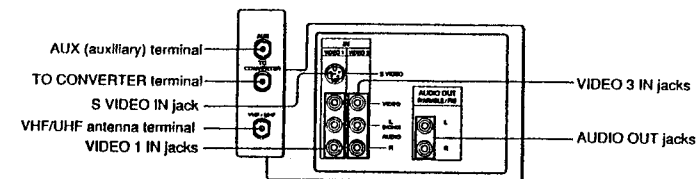
KV-27TS36 KV-32TS36



KV-27TS32



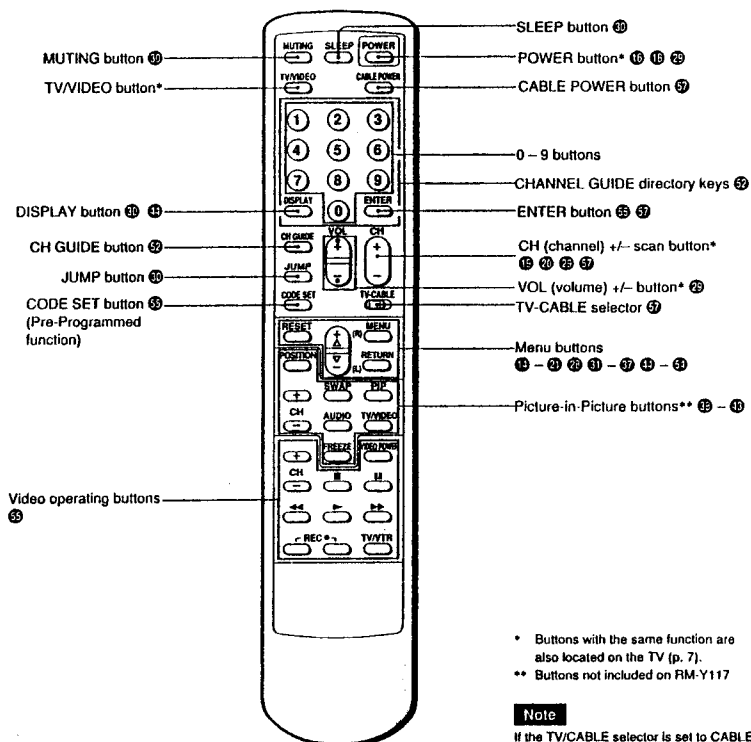
KV-32TS46





## Remote Commander

For details, see the pages indicated by the numbered black circles ●.

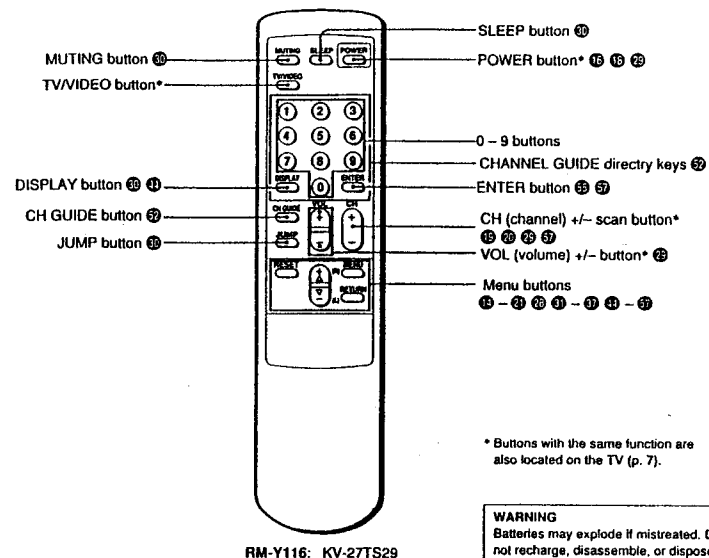


RM-Y118: KV-27TS36 KV-32TS46  
(RM-Y117: KV-27TS32)

- \* Buttons with the same function are also located on the TV (p. 7).
- \*\* Buttons not included on RM-Y117

### Note

If the TV/CABLE selector is set to CABLE, the Remote Commander is able to control a connected cable box, not the TV. Set the selector to TV to control the TV set with the Remote Commander (You can use POWER button at any case).

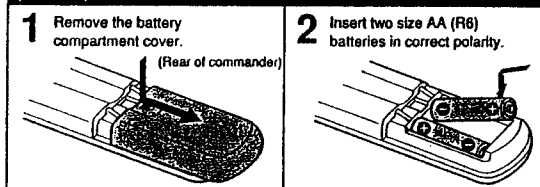


RM-Y116: KV-27TS29

**WARNING**  
Batteries may explode if mistreated. Do not recharge, disassemble, or dispose of in fire.

### Installing Batteries

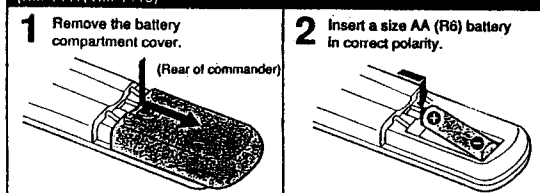
(RM-Y116)



**Battery life**  
With normal operation, batteries will last up to half a year. If the Remote Commander does not operate properly, the batteries might be exhausted. Replace both of them with new ones.

**To avoid damage from possible battery leakage**  
Remove the batteries if you do not plan to use the Remote Commander for a fairly long time.

(RM-Y117, RM-Y118)





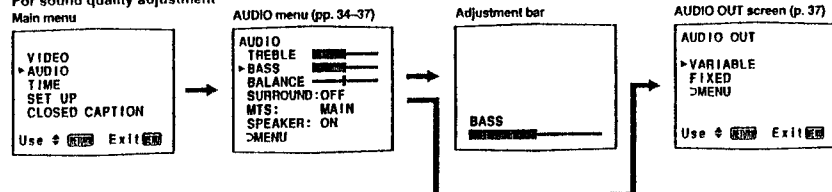
## 1-3. USING THE ON-SCREEN MENUS

The following flow chart shows the different levels of on-screen menus that you can use to make various adjustments and settings. See the indicated pages for instructions on using each feature.

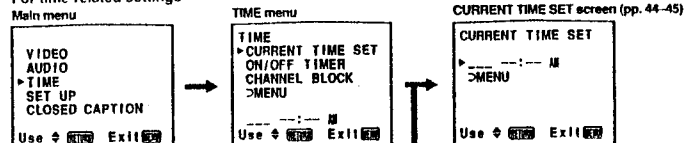
### For picture quality adjustment



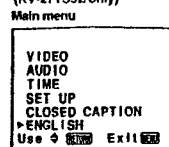
### For sound quality adjustment



### For time-related settings



### For language setting (p. 16) (KV-27TS32 only)



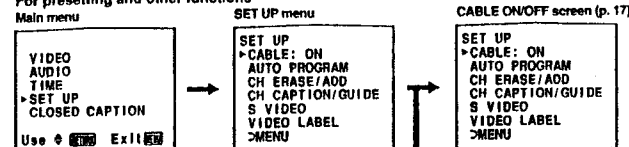
### ON/OFF TIMER screen (pp. 46-47)



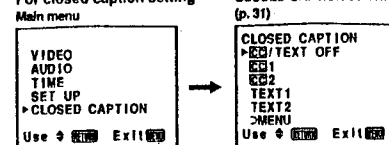
### CHANNEL BLOCK screen (pp. 48-49)



### For presetting and other functions



### For closed caption setting



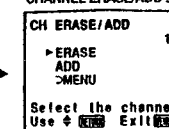
### CABLE ON/OFF screen (p. 17)



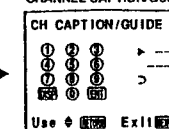
### AUTO PROGRAM screen (p. 18)



### CHANNEL ERASE/ADD screen (pp. 19-21)



### CHANNEL CAPTION/GUIDE screen (pp. 50-51)



### S VIDEO ON/OFF screen (p. 28)

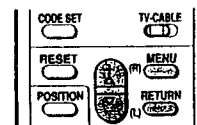


### VIDEO LABEL screen (pp. 53-54)



### Navigating through the Menus

Remote Commander



To display the main menu  
Press MENU.

To return to the previous menu  
Press Δ+ or ∇- to select "MENU."  
Then press RETURN.

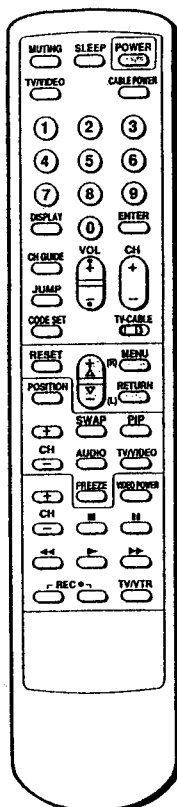
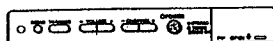
To return to the main menu  
Repeat the above, until you reach the main menu.

To return to the normal screen  
Press MENU on the Remote Commander.

### Note

The menus disappear automatically if you do not press a button within 90 seconds.  
The menu you cannot select appears in black.





RM-Y118

To return to the normal screen  
Press MENU.

## Changing the Menu Language (KV-27TS32:2970RS only)

The menu language is factory-set to ENGLISH. Follow these instructions to change the menu language to Spanish or back to English.

- 1 Press POWER on the TV or the Remote Commander to turn the TV on.

POWER
- 2 Press MENU. The main menu appears.

MENU

VIDEO  
AUDIO  
TIME  
SET UP  
CLOSED CAPTION  
ENGLISH  
Use  $\Delta$   $\nabla$  Exit
- 3 Press  $\Delta$  or  $\nabla$  to select ENGLISH. Then press RETURN.

RETURN

VIDEO  
AUDIO  
TIME  
SET UP  
CLOSED CAPTION  
ENGLISH  
Use  $\Delta$   $\nabla$  Exit
- 4 Press  $\Delta$  or  $\nabla$  to select language. Each time you press  $\Delta$  or  $\nabla$ , ESPAÑOL and ENGLISH menus appear.

RETURN

VIDEO  
AUDIO  
TIME  
SET UP  
CLOSED CAPTION  
ESPAÑOL  
Use  $\Delta$   $\nabla$  Salir

VIDEO  
AUDIO  
TIME  
SET UP  
CLOSED CAPTION  
ENGLISH  
Use  $\Delta$   $\nabla$  Exit

**Note**  
Certain parts of the ESPAÑOL menus remain in English.
- 5 Press RETURN. The language is selected.

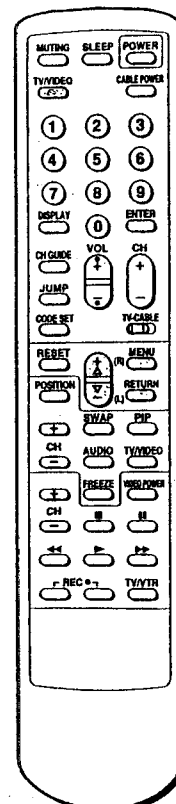
RETURN

VIDEO  
AUDIO  
HORA  
AJUSTES  
CLOSED CAPTION  
ESPAÑOL  
Use  $\Delta$   $\nabla$  Salir

Spanish menu

## 1-4. TURNING THE CABLE MODE ON OR OFF

All of the controls are on the Remote Commander.



RM-Y118

To return to the normal screen  
Press MENU.

If you have cable connected to your TV (pp.12-13), follow the steps below to turn the cable connection on or off. CABLE is preset to ON when you use your TV for the first time. Then turn CABLE to OFF to preset or watch VHF or UHF channels (pp.18-21 and 29).

- 1 Press MENU. The main menu appears.

MENU

VIDEO  
AUDIO  
TIME  
SET UP  
CLOSED CAPTION  
Use  $\Delta$   $\nabla$  Exit
- 2 Press  $\Delta$  or  $\nabla$  to select SET UP.

SET UP

VIDEO  
AUDIO  
TIME  
SET UP  
CLOSED CAPTION  
Use  $\Delta$   $\nabla$  Exit

Press RETURN. The SET UP menu appears, and the cursor points to CABLE.

RETURN

**Note**  
If the CABLE display appears in black, the TV is in VIDEO mode and you cannot select CABLE. Press TV/VIDEO to change to TV mode.

SET UP  
CABLE: ON  
AUTO PROGRAM  
CH ERASE/ADD  
CH CAPTION/GUIDE  
S VIDEO  
VIDEO LABEL  
>MENU
- 3 Press RETURN again.

RETURN

Press  $\Delta$  or  $\nabla$  to select ON or OFF alternately.

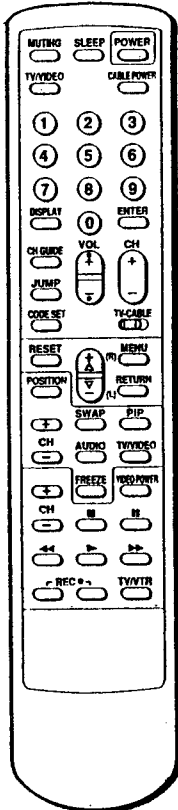
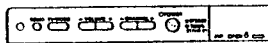
SET UP  
CABLE: ON  
AUTO PROGRAM  
CH ERASE/ADD  
CH CAPTION/GUIDE  
S VIDEO  
VIDEO LABEL  
>MENU

SET UP  
CABLE: OFF  
AUTO PROGRAM  
CH ERASE/ADD  
CH CAPTION/GUIDE  
S VIDEO  
VIDEO LABEL  
>MENU

Press RETURN. The setting is completed.



## 1-5. PRESETTING TV CHANNELS



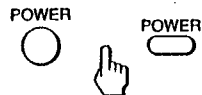
RM-Y118

Channels that can be received on this TV:

VHF	UHF	Cable
2-13	14-69	1-125

### Presetting TV Channels Automatically

1 Press POWER on the TV or the Remote Commander to turn the TV on.



2 Set the cable connection on or off, depending on if you want to preset cable or VHF/UHF channels.  
(Follow the steps in "Turning the Cable Mode On or Off", p.17)

If "VIDEO" is displayed on the screen, press the TV/VIDEO button on the TV or the Remote Commander so that a channel number appears.

3 Press MENU.



VIDEO  
AUDIO  
TIME  
SET UP  
CLOSED CAPTION  
Use  $\Delta$  RETURN Exit

4 Press  $\Delta$  or  $\nabla$  to select SET UP.  
Then press RETURN.



SET UP  
CABLE: ON  
AUTO PROGRAM  
CH ERASE/ADD  
CH CAPTION/GUIDE  
S VIDEO  
VIDEO LABEL  
>MENU

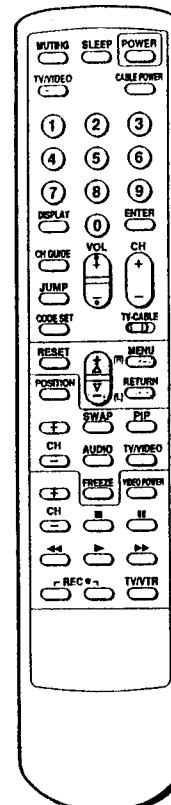
5 Press  $\Delta$  or  $\nabla$  to select AUTO PROGRAM.  
Then press RETURN.



SET UP  
CABLE: ON  
AUTO PROGRAM  
CH ERASE/ADD  
CH CAPTION/GUIDE  
S VIDEO  
VIDEO LABEL  
>MENU

"AUTO PROGRAM" appears on the screen and receivable channels (other than the channels already preset) are preset in numerical sequence. The channels previously preset will not remain in the TV's memory.  
When no more channels can be found, the programming stops and the lowest numbered channel is displayed.

To erase unnecessary channels, or to add channels that could not be preset automatically because their signal was too weak, follow the steps in "Erasing Unnecessary Channels — CHANNEL ERASE" (pp.19-20) and "Presetting Only Desired Channels — CHANNEL ADD" (p. 21).



RM-Y118

### Erasing Unnecessary Channels—CHANNEL ERASE

Use this feature to erase unnecessary TV channels, so that when you press CH  $\Delta$  or  $\nabla$ , the channel(s) are skipped.

1 Press MENU.  
The main menu appears.



VIDEO  
AUDIO  
TIME  
SET UP  
CLOSED CAPTION  
Use  $\Delta$  RETURN Exit

2 Press  $\Delta$  or  $\nabla$  to select SET UP.



VIDEO  
AUDIO  
TIME  
SET UP  
CLOSED CAPTION  
Use  $\Delta$  RETURN Exit

Press RETURN.  
The SET UP menu appears.



SET UP  
CABLE: ON  
AUTO PROGRAM  
CH ERASE/ADD  
CH CAPTION/GUIDE  
S VIDEO  
VIDEO LABEL  
>MENU

3 Press  $\Delta$  or  $\nabla$  to select CH ERASE/ADD.



SET UP  
CABLE: ON  
AUTO PROGRAM  
CH ERASE/ADD  
CH CAPTION/GUIDE  
S VIDEO  
VIDEO LABEL  
>MENU

Press RETURN.  
The CH ERASE/ADD screen appears, and the cursor points to "ERASE".

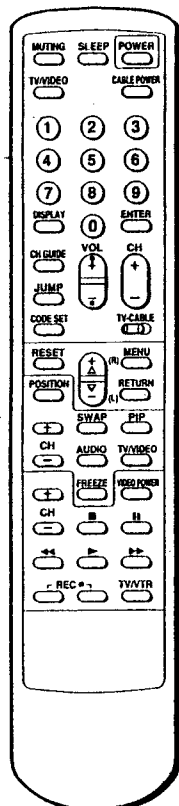


CH ERASE/ADD  
ERASE  
ADD  
>MENU  
Select the channel  
Use  $\Delta$  RETURN Exit

#### Note

If CH ERASE/ADD display appears in black, the TV is in video mode and you cannot select CH ERASE/ADD.  
Press TV/VIDEO to change to TV mode.





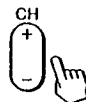
RM-Y118

To return to the normal screen  
Press MENU.

**Note**

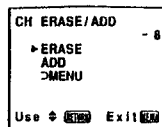
When you erase a VHF or UHF channel, the cable TV channel with the same number is also erased, and vice versa.

- 4** Press the CH +/- button to select the channel you want to erase.  
For example, to erase channel 8, press CH +/- until 8 appears.



Press RETURN.

A "-" sign appears in front of the channel number display, indicating that the channel is erased from the channel scan memory.



The next time you press the CH +/- buttons, channel 8 will be skipped.

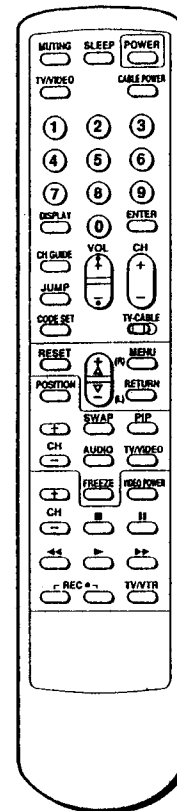
To erase other channels  
Repeat step 4.

**Cable TV channel chart\***

Cable TV systems use letters or numbers to designate channels. To tune in a channel, refer to the chart below.

Number on the TV	Corresponding cable TV channel	Number on the TV	Corresponding cable TV channel
1	A-8	33	T
5	A-7	34	U
6	A-6	35	V
14	A	36	W
15	B	37	W+1
16	C	38	W+2
17	D	39	W+3
18	E	40	W+4
19	F	93	W+57
20	G	94	W+58
21	H	95	A-5
22	I	96	A-4
23	J	97	A-3
24	K	98	A-2
25	L	99	A-1
26	M	100	W+59
27	N	101	W+60
28	O	102	W+61
29	P	103	W+62
30	Q	123	W+82
31	R	124	W+83
32	S	125	W+84

\* This designation of cable TV channels conforms to the EIA/NCTA recommendation. Check with your local cable TV company for more complete information on the available channels.



RM-Y118

To return to the normal screen  
Press MENU.

**Note**

If you add a VHF or UHF channel, the cable TV channel with the same number is also added, and vice versa.

**Presetting Only Desired Channels—CHANNEL ADD**

Use this feature to add channels one by one to the channel scan memory.

- 1-3** (Follow steps 1-3 in "Erasing Unnecessary Channels—CHANNEL ERASE," p.19.)

**Note**

If the CH ERASE/ADD display appears in black, the TV is in video mode and you cannot select CHANNEL ERASE/ADD. Press TV/VIDEO to change to TV mode.

- 4** Press + or - to select ADD.



- 5** Press 0-9 and ENTER to select the channel you want to add.  
For example, to add channel 25, press 2, 5 and ENTER.



Press RETURN.

A "+" sign appears in front of the channel number display, indicating that the channel is added to the channel scan memory.

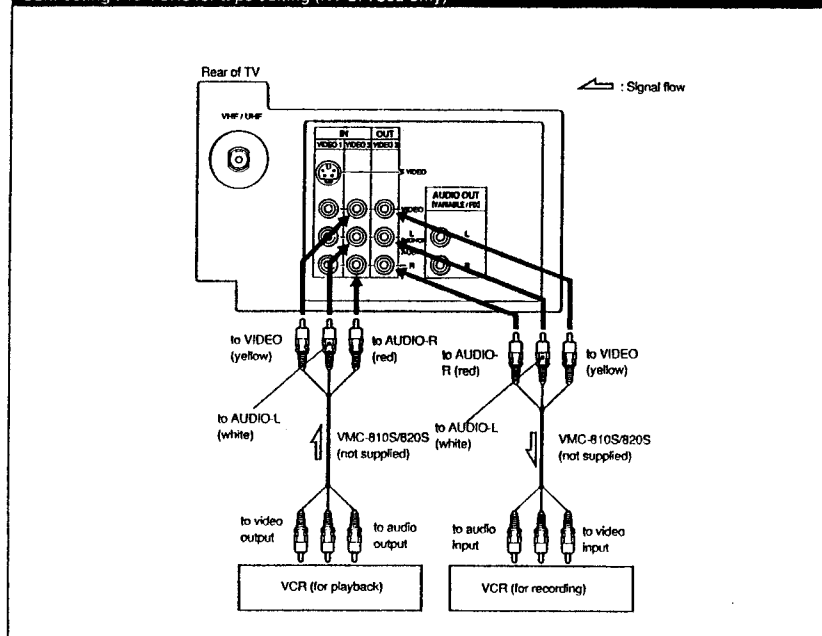


To add other channels  
Repeat step 5.



## 1-6. CONNECTING OTHER EQUIPMENT

Connecting two VCRs for tape editing (KV-27TS32 only)



### Watching a different image while duplicating

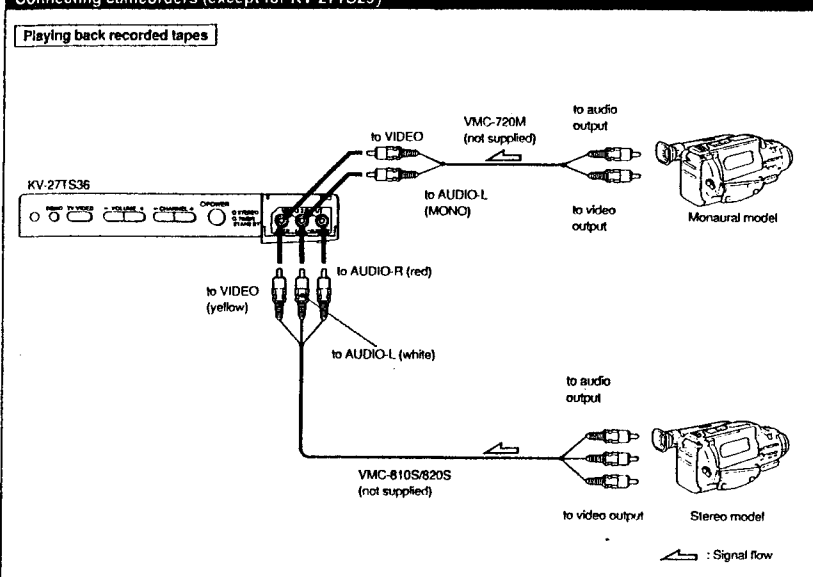
You can duplicate your recorded tapes by connecting two VCRs.

The VIDEO 3 OUT jacks only output the signal from the VIDEO 3 IN jacks. Connect a VCR for playback to VIDEO 3 IN jacks, and a VCR for recording to the VIDEO 3 OUT jacks. You can watch a TV program or images from VIDEO 1 IN or VIDEO 2 IN during duplicating.

### To watch a different input image

Press TV/VIDEO on the TV or on the Remote Commander to select the input image you want to watch.

Connecting camcorders (except for KV-27TS29)



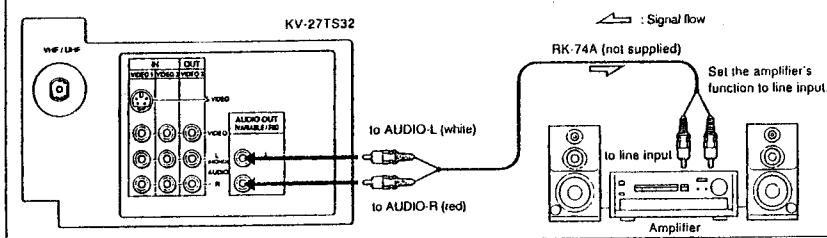
### Preparing for use

Same as p. 23.



## Audio System

### Listening to TV or connected VCR sound through an audio system



#### Preparing for use

Display the mode set menu and set **SPEAKER** to **OFF** to cut off the TV speaker sound (p. 37), and listen to the TV's sound solely through the audio system speakers.

#### Note

By setting **AUDIO OUT** variable, you can adjust the bass, treble and balance, or select surround or an **MTS** (Multichannel TV Sound) mode, using the on-screen menus (pp. 34-36).

### Connecting active super woofer (supplied with KV-32TS46 only)

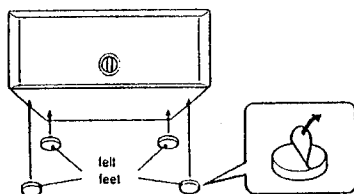
#### Preparing for use

To enjoy the active super woofer sound, make sure the connections are made as illustrated on the next page.

The woofer volume varies according to the TV volume. Adjust the woofer level control properly.

The active super woofer outputs the signal input to its **AUDIO IN** jacks. If you connect an audio system to the active super woofer's **AUDIO OUT** jacks, you can enjoy the sound from the audio system and the active super woofer simultaneously.

To make the active super woofer stable, attach the felt feet (supplied) to the bottom.

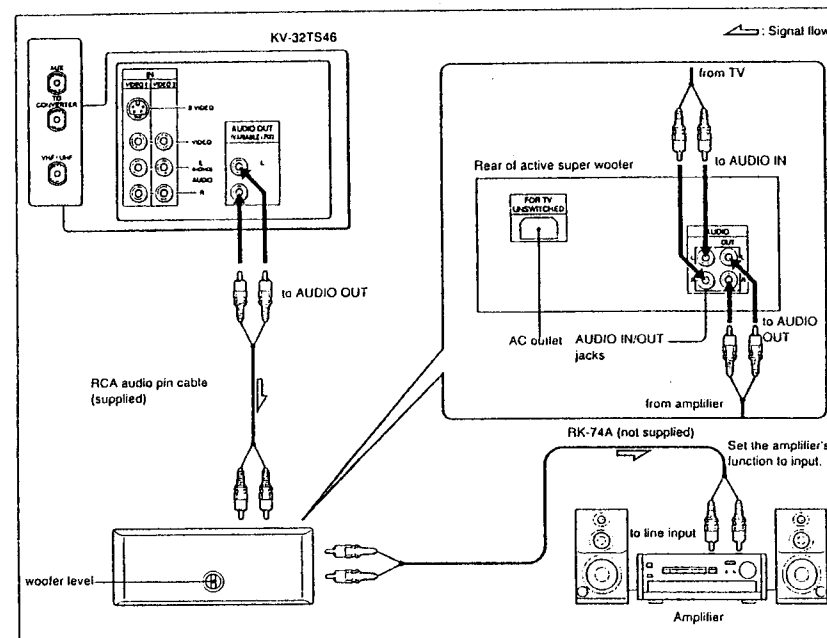


#### Notes

- Do not place the woofer on the TV set. To enjoy good sound, place the woofer on a hard object near the TV avoiding soft objects like carpets, sofas, etc.
- If you do not use the TV for more than 20 seconds, the active super woofer is turned off automatically to save on power consumption.
- When you release **MUTING**, the sound of the woofer is heard before that of the TV. This is normal.
- If you set **SPEAKER** to **OFF** in the **AUDIO** menu and select **FIX** in the **AUDIO OUT** menu (p. 37), the volume of the woofer may be excessive. We recommend that you set **SPEAKER** to **ON** when you use the active super woofer.
- You should only connect the KV-32TS46 to the AC outlet on the active super woofer.

#### Active Super Woofer Specification

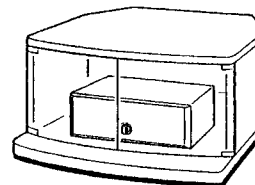
Input: 500 mVrms (100% modulation)  
 Output: 500 mVrms (100% modulation)  
 Impedance: 20 kilohms  
 Speaker output: 9 W (100 Hz)  
 Dimensions: 435 x 165 x 164 mm (W x H x D)  
 (17 1/4 x 6 1/2 x 6 1/2 in.)  
 Mass: 3.9 kg  
 (8 lbs 10 oz)



#### Using TV stand

When you place the active super woofer on a TV stand (not supplied), remove the rear panel of the stand.

Sony or other manufacture's stand

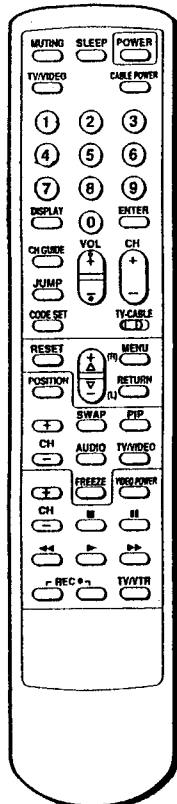


#### Note

For good sound quality, avoid placing the stand in front of a curtain or close to a wall.



## 1-7. WATCHING TV PROGRAMS



RM-Y118

To return to the normal screen  
Press MENU.

### Note

If you set S VIDEO to ON, the TV automatically receives S video signals whenever a VCR with S video is connected.

### Watching a Video with Your S Video-Equipped VCR (except for KV-27TS29/2970RS)

Use this feature to set S VIDEO to ON or OFF depending on the kind of video equipment you have connected to the TV. For instructions on connecting video equipment, see pp.22-25.

### Note

If the TV is in TV, VIDEO 2 or VIDEO 3 mode, the S VIDEO display appears in black and cannot be selected.

Press TV/VIDEO to change to VIDEO 1 mode.

- 1 Press MENU.  
The main menu appears.



VIDEO  
AUDIO  
TIME  
SET UP  
CLOSED CAPTION  
Use  $\Delta$   $\nabla$  Exit

- 2 Press  $\Delta$  or  $\nabla$  to select SET UP.



VIDEO  
AUDIO  
TIME  
SET UP  
CLOSED CAPTION  
Use  $\Delta$   $\nabla$  Exit

Press RETURN.  
The SET UP menu appears.



SET UP  
CABLE: ON  
AUTO PROGRAM  
CH ERASE/ADD  
CH CAPTION/GUIDE  
S VIDEO: ON  
VIDEO LABEL  
>MENU

- 3 Press  $\Delta$  or  $\nabla$  to select S VIDEO.  
Then press RETURN.



SET UP  
CABLE: ON  
AUTO PROGRAM  
CH ERASE/ADD  
CH CAPTION/GUIDE  
S VIDEO: ON  
VIDEO LABEL  
>MENU

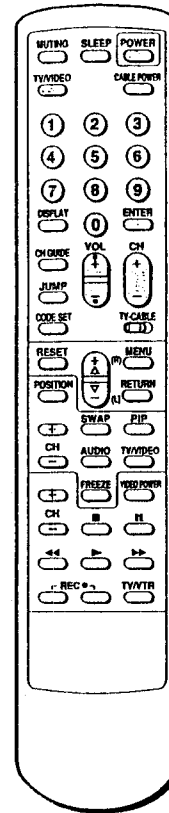
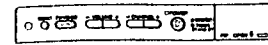
Press  $\Delta$  or  $\nabla$  to select ON or OFF alternately.

SET UP  
CABLE: ON  
AUTO PROGRAM  
CH ERASE/ADD  
CH CAPTION/GUIDE  
S VIDEO: ON  
VIDEO LABEL  
>MENU



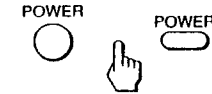
SET UP  
CABLE: ON  
AUTO PROGRAM  
CH ERASE/ADD  
CH CAPTION/GUIDE  
S VIDEO: OFF  
VIDEO LABEL  
>MENU

Press RETURN.  
The setting is completed.



RM-Y118

- 1 Press POWER on the TV or the Remote Commander to turn the TV on.  
The TIMER/STAND BY indicator blinks until the picture appears.

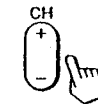


- 2 Turn the cable mode on or off to select the type of channel you want to watch, VHF/UHF or cable TV.  
(Follow the steps in "Turning the Cable Mode On or Off," p. 17.)

If "VIDEO" or "S VIDEO" is displayed on the screen, press the TV/VIDEO button on the TV or on the Remote Commander so that the channel number appears.

- 3 Select a channel in one of the following two ways:

To scan the preset channels\* in numerical sequence  
Press CH +/-.

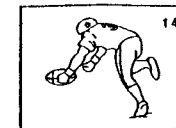


\* For more information on presetting channels, see pp. 18 - 21.

To select a channel directly

Press 0 - 9 and ENTER.

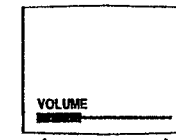
For example, to select channel 14, press 1, 4 and ENTER.



- 4 Press VOL +/- to adjust the volume.



The display will disappear automatically after 3 seconds.

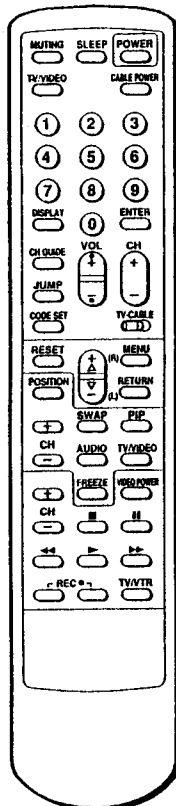


Press + to increase the volume.  
Press - to decrease the volume.

To turn off the TV  
Press POWER on the TV or the Remote Commander again.



## 1-8. USING CONVENIENT FEATURES



RM-Y118

### Muting the Sound — MUTING

Press **MUTING**.  
The display "MUTING" will appear on the screen.

To restore the sound  
Press **MUTING** again, or press **VOL +**.



### Keeping the Displays On-Screen — DISPLAY

To display the channel  
Press **DISPLAY**.  
All the existing displays appear: channel number, channel caption (if set), MTS mode ("SAP" only), window picture input mode and the current time ("AM" or "PM" disappears after about three seconds).



To cancel the display  
Press **DISPLAY** again.  
The channel display will disappear.

### Using the Sleep Timer — SLEEP

The sleep timer turns off the TV automatically after the amount of time you select.

Press **SLEEP**.  
Each time you press **SLEEP**, the time increments "30", "60", "90" and "OFF" mode appear in sequence.



SLEEP 30
SLEEP 60
SLEEP 90
SLEEP OFF

The **SLEEP** display appears about one minute before the TV turns off.

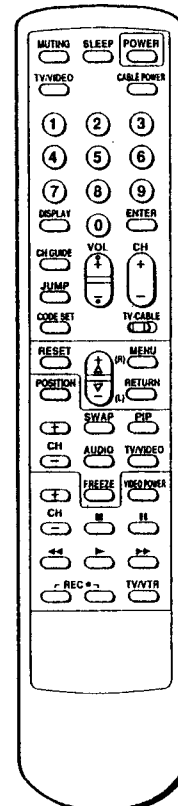
To cancel the setting  
Press **SLEEP** until "OFF" mode appears.  
The "SLEEP OFF" display appears for about three seconds.  
OR  
Turn the TV off.  
The sleep timer setting is cancelled.

### Switching Quickly Between Two Channels—JUMP

Press **JUMP** once to recall the channel you were watching previously. Press **JUMP** again to switch back. Use this feature to keep track of two programs alternately.



## 1-9. USING CLOSED CAPTION (U.S.A. models only)



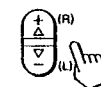
RM-Y118

**1** Press **MENU**.  
The main menu appears.



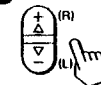
VIDEO  
AUDIO  
TIME  
SET UP  
CLOSED CAPTION  
Use  $\Delta$   $\nabla$  Exit

**2** Press  $\Delta$  or  $\nabla$  to select **CLOSED CAPTION**.  
Then press **RETURN**.  
The **CLOSED CAPTION** screen appears.



CLOSED CAPTION  
CC/TEXT OFF  
CC1  
CC2  
TEXT1  
TEXT2  
MENU  
Use  $\Delta$   $\nabla$  Exit

**3** Press  $\Delta$  or  $\nabla$  to select closed caption mode.



Select **CC1** or **CC2** to view Captions.  
A Caption is a printed version of the dialogue or sound effects of a program. (The mode should be set to **CC1** for most programs.)

CLOSED CAPTION  
CC/TEXT OFF  
CC1  
CC2  
TEXT1  
TEXT2  
MENU  
Use  $\Delta$   $\nabla$  Exit

Select **TEXT1** or **TEXT2** to view Text.  
Text is information that is presented using the half to full television screen. It is usually not related to the program.

CLOSED CAPTION  
CC/TEXT OFF  
CC1  
CC2  
TEXT1  
TEXT2  
MENU  
Use  $\Delta$   $\nabla$  Exit

Select **CC/TEXT OFF** if you do not want to use the **CLOSED CAPTION** mode.

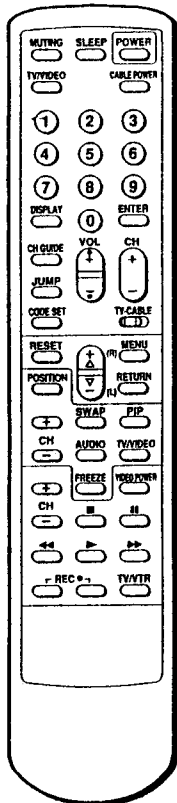
Press **RETURN**.  
The setting is completed.



CLOSED CAPTION  
CC/TEXT OFF  
CC1  
CC2  
TEXT1  
TEXT2  
MENU  
Use  $\Delta$   $\nabla$  Exit



## 1-10. WATCHING TWO PICTURES AT ONCE (Picture-in-Picture)

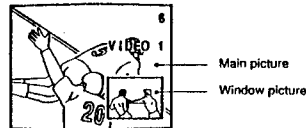


RM-Y118

### Note

To operate your VCR with the supplied Remote Commander, See "Using the Pre-Programmed Remote Commander", pp. 55-57.

You can watch both the main picture and a window picture simultaneously by using the Picture-in-Picture (PIP) function. Model KV-32TS46 is equipped with two-tuner PIP, allowing you to watch two TV channels at once. Other models are equipped with one-tuner PIP. To watch two different TV channels, you must first connect a VCR to the TV, to watch a second TV channel through the VCR tuner. (See "Connecting Other Equipment", pp. 22-27.)



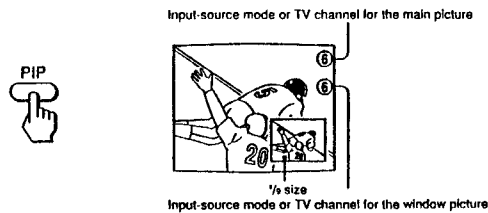
### Picture-in-Picture special features

When watching the main picture and a window picture, you can:

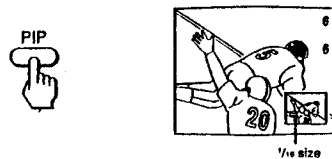
- Swap the main and window pictures (SWAP).
- Change the position of the window picture (POSITION).
- Display a still picture as a window (FREEZE).
- Choose the sound from the main or window picture (AUDIO).

### Displaying a window picture—PIP

Press PIP to display a window picture



Press PIP again to display a smaller window picture



To disappear the window picture  
Press PIP once more.

### Changing the window picture input mode

1 Press PIP to display a window picture.




2 Press TV/VIDEO in the Picture-in-Picture control area to select the input mode. Each time you press TV/VIDEO, "TV", "VIDEO 1", "VIDEO 2" and "VIDEO 3" appear in sequence.



A window picture will appear in the same input mode as the last time you used PIP.

### To receive the window picture sound

Press AUDIO.

The  display appears for a few seconds, indicating that the window picture sound is being received.

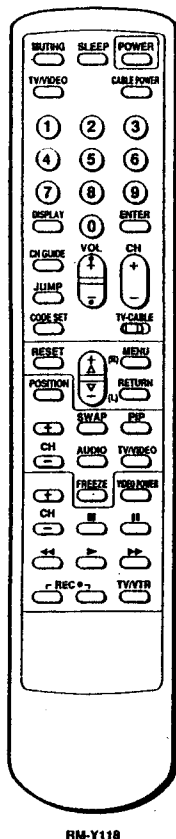


To restore the main picture sound  
Press AUDIO again.

### Notes

- If the main picture is not receiving an image, the window picture may be in black and white.
- When you turn PIP on or when you turn the TV on with PIP mode on the window picture will appear at the bottom right of the screen.
- The window picture may be affected by the condition of the main picture.
- The window picture sound is also output from the VARIABLE/FIX AUDIO OUT jacks.





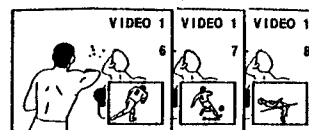
RM-Y110

### Changing TV channels in the window picture

- 1 Press PIP to display a window picture.



- 2 Press CH +/- in the PIP control area.

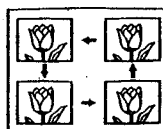


### Changing the position of the window picture—POSITION

- 1 Press PIP to display a window picture.



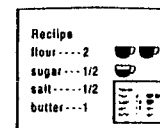
- 2 Press POSITION.  
Each time you press POSITION, the window picture will move counterclockwise on the screen, as illustrated below.



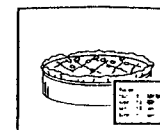
### Displaying a still picture — FREEZE

Use the FREEZE function to display a still picture as a window. This function is useful when you want to write down a recipe from a cooking program, a displayed address or a phone number and so on.

- 1 Press PIP to display a window picture.



- 2 Press FREEZE.  
The window picture image remains still on the screen.



To restore the normal picture  
Press FREEZE again.

### Swapping the main and window pictures — SWAP

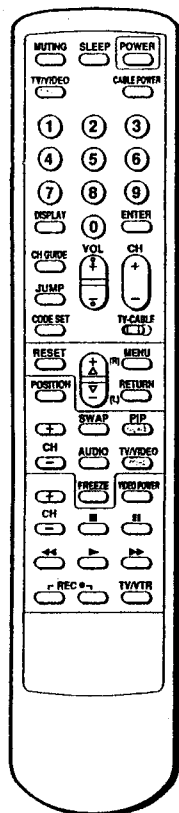
- 1 Press PIP to display a window picture.



- 2 Press SWAP.  
Each time you press SWAP, the images from the main and window pictures switch places.



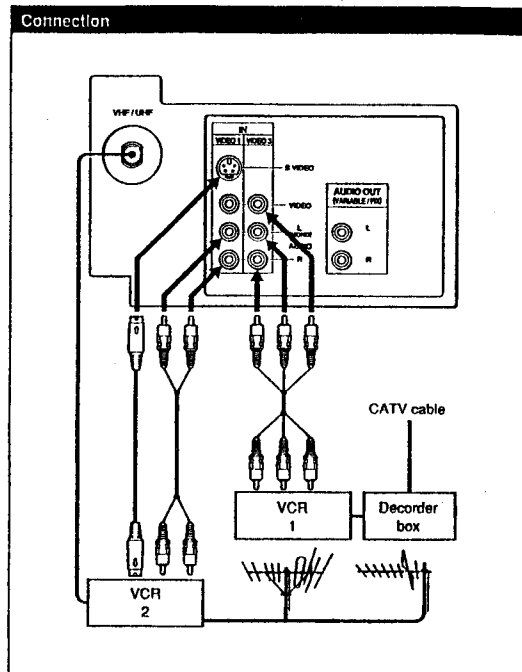




RM-Y118

### Displaying a pay cable TV channel as a window picture

To display a pay cable TV channel as a window picture, connect your decoder box as illustrated below.



#### Note

The channels being received through the AUX terminal cannot be displayed as a window picture. (KV-32TS46 only)

After making the connections, turn the cable mode on by following the steps "Turning the Cable Mode On or Off", p. 17. Then continue with steps below.

- 1 Press PIP to display a window picture.



- 2 Press TV/VIDEO in the Picture-in-Picture control area to select the input mode. Each time you press TV/VIDEO, "TV", "VIDEO 1", "VIDEO 2" and "VIDEO 3" appear in sequence.

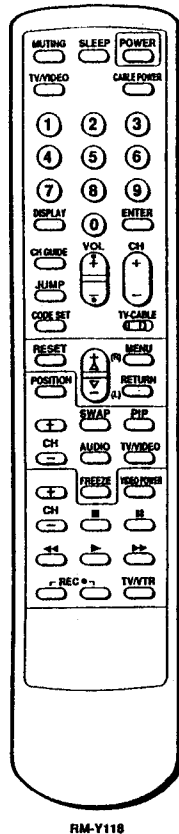


- 3 Put your VCR on an inactive channel (CH 3 or 4).

- 4 Change pay cable TV channels with the decoder box.



## 1-11. USING THE TIMER-ACTIVATED FUNCTIONS



RM-Y118

### Setting the Clock—CURRENT TIME SET

Follow these instructions to set the current time. The correct time must be set in order to use the timer-activated functions (ON/OFF TIMER, CHANNEL BLOCK).

EXAMPLE: Set the time to 3:15 PM, Monday.

- 1** Press MENU.  
The main menu appears.



VIDEO  
AUDIO  
TIME  
SET UP  
CLOSED CAPTION  
Use  $\Delta$   $\nabla$  Exit

- 2** Press  $\Delta$  or  $\nabla$  to select TIME.



VIDEO  
AUDIO  
TIME  
SET UP  
CLOSED CAPTION  
Use  $\Delta$   $\nabla$  Exit

Press RETURN.  
The TIME menu appears, and the cursor points to "CURRENT TIME SET".



TIME  
CURRENT TIME SET  
ON/OFF TIMER  
CHANNEL BLOCK  
MENU  
Use  $\Delta$   $\nabla$  Exit

- 3** Press RETURN.  
The CURRENT TIME SET screen appears.



CURRENT TIME SET  
MON 12:00 M  
MENU  
Use  $\Delta$   $\nabla$  Exit

- 4** Press RETURN again.  
"Set the day:" appears on the screen.



CURRENT TIME SET  
SUN 12:00 M  
MENU  
Set the day.  
Use  $\Delta$   $\nabla$  Exit

- 5** Press  $\Delta$  or  $\nabla$  to set the day.  
Each time you press  $\Delta$  or  $\nabla$ , the day changes consecutively.



Press RETURN.  
"Set the time:" appears on the screen.



CURRENT TIME SET  
MON 12:00 M  
MENU  
Set the time.  
Use  $\Delta$   $\nabla$  Exit

- 6** Press  $\Delta$  or  $\nabla$  to set the hour.  
Each time you press  $\Delta$  or  $\nabla$ , the hour changes starting with "12:00 AM."



Press RETURN.



CURRENT TIME SET  
MON 3:00 M  
MENU  
Set the time.  
Use  $\Delta$   $\nabla$  Exit

- 7** Press  $\Delta$  or  $\nabla$  to set the minutes.  
Each time you press  $\Delta$  or  $\nabla$ , the minutes change in sequence.



Press RETURN.  
The setting is completed, and the clock starts.



CURRENT TIME SET  
MON 3:15 M  
MENU  
Set the time.  
Use  $\Delta$   $\nabla$  Exit

CURRENT TIME SET  
MON 3:15 M  
MENU  
Use  $\Delta$   $\nabla$  Exit

To reset the time  
Press RESET while in the CURRENT TIME screen, and repeat steps 4-7.

To display the time  
Press DISPLAY.

To return to the normal screen  
Press MENU.

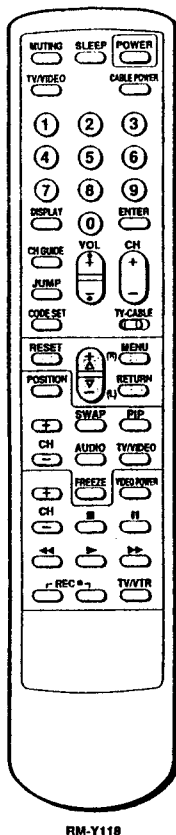
#### Notes

- The internal clock of this TV operates on a 12-hour cycle. If a 24-hour cycle number (for instance, 13:00) is entered, it will be cleared when you press RETURN.

12:00 AM stands for midnight.  
12:00 PM stands for noon.

- All the settings including CURRENT TIME SET will be erased if you unplug the TV or a power failure occurs. Reset the current time by following steps 1-7.





RM-Y118

## Setting the ON/OFF TIMER

With this function you can set your favorite program to appear on the screen at the time that you set.

EXAMPLE: Set the timer to turn on the TV every Monday through Friday at 3:15 PM for 2 hours, on channel 21.

- 1** Press MENU.  
The main menu appears.



VIDEO  
AUDIO  
TIME  
SET UP  
CLOSED CAPTION  
Use  $\Delta$  (R) Exit (L)

- 2** Press  $\Delta$  or  $\nabla$  to select TIME.  
Then press RETURN.  
The TIME menu appears.



TIME  
CURRENT TIME SET  
ON/OFF TIMER  
CHANNEL BLOCK  
MENU  
MON 3:15 M  
Use  $\Delta$  (R) Exit (L)

- 3** Press  $\Delta$  or  $\nabla$  to select ON/OFF TIMER.  
Then press RETURN.  
The ON/OFF TIMER screen appears.



ON/OFF TIMER  
EVERY SUN-SAT  
12:00M\_h CH\_\_\_\_  
MENU  
Use  $\Delta$  (R) Exit (L)

### Note

If the ON/OFF TIMER display appears in black, the current time has not been set and you cannot select ON/OFF TIMER. To set the clock, see "Setting the Clock—CURRENT TIME SET", pp. 44–45.

- 4** Press RETURN again.  
"Set the day." appears on the screen.



ON/OFF TIMER  
EVERY SUN-SAT  
12:00M\_h CH\_\_\_\_  
MENU  
Set the day.  
Use  $\Delta$  (R) Exit (L)

- 5** Press  $\Delta$  or  $\nabla$  to set the day.  
Each time you press  $\Delta$  or  $\nabla$ , the days of the week change as shown in Fig. 1.  
Then press RETURN.  
"Set the time." appears on the screen.



ON/OFF TIMER  
EVERY MON-FRI  
12:00M\_h CH\_\_\_\_  
MENU  
Set the time.  
Use  $\Delta$  (R) Exit (L)

- 6** Press  $\Delta$  or  $\nabla$  to set the hour that you want the TIMER to start.  
Each time you press  $\Delta$  or  $\nabla$ , the hour changes in sequence.  
Then press RETURN.



ON/OFF TIMER  
EVERY MON-FRI  
3:00M\_h CH\_\_\_\_  
MENU  
Set the time.  
Use  $\Delta$  (R) Exit (L)

- 7** Press  $\Delta$  or  $\nabla$  to set the minutes.  
Each time you press  $\Delta$  or  $\nabla$ , the minutes change in sequence.  
Then press RETURN.  
"Set the duration." appears on the screen.



ON/OFF TIMER  
EVERY MON-FRI  
3:15M\_h CH\_\_\_\_  
MENU  
Set the duration.  
Use  $\Delta$  (R) Exit (L)

- 8** Press  $\Delta$  or  $\nabla$  to set the duration of time.  
Each time you press  $\Delta$  or  $\nabla$ , the duration changes from "1" to "6" in sequence.  
Then press RETURN.  
"Select the channel" appears on the screen.



ON/OFF TIMER  
EVERY MON-FRI  
3:15M 2h CH\_\_\_\_  
MENU  
Select the channel  
Use  $\Delta$  (R) Exit (L)

- 9** Press  $\Delta$  or  $\nabla$  to set the channel that you want the TV to tune in.  
Each time you press  $\Delta$  or  $\nabla$ , the channel number changes from 1 to 125 in sequence.



ON/OFF TIMER  
EVERY MON-FRI  
3:15M 2h CH 21  
MENU  
Select the channel  
Use  $\Delta$  (R) Exit (L)

Press RETURN.  
The setting is completed, and the TIMER indicator on the front of the TV lights up.



ON/OFF TIMER  
EVERY MON-FRI  
3:15M 2h CH 21  
MENU  
Use  $\Delta$  (R) Exit (L)

To clear the ON/OFF TIMER setting  
Press RESET while in the ON/OFF TIMER screen.

To return to the normal screen  
Press MENU.

### Notes

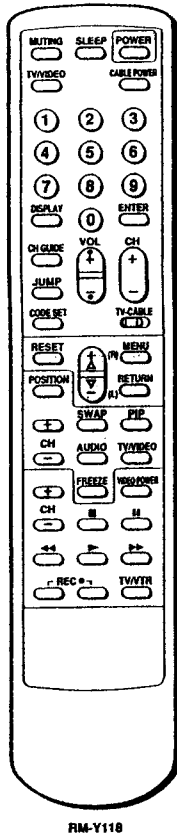
- While the TIMER is set, the TIMER indicator on the TV is on.
- One minute before the timer goes off, the "TV will turn off" display will appear on the screen.
- All the settings including ON/OFF TIMER will be erased if you unplug the TV or a power failure occurs. Reset the ON/OFF TIMER by following steps 1-9.
- If you have not set the clock correctly, the ON/OFF TIMER will not operate at the proper time. To set the clock, see "Setting the Clock—CURRENT TIME SET", pp. 44–45.

Fig. 1  
Selecting the day(s) of the week  
When you press  $\Delta$ , the days of the week appear in the following order.



(V-: reverse order)





RM-Y118

## Setting CHANNEL BLOCK

Use this function to block a channel from appearing on the screen during the time you specify. You can use this function to prevent children from watching undesirable programs.

EXAMPLE: Set CHANNEL BLOCK every Sunday at 8:45 PM for one hour, on channel 38.

- 1** Press MENU.  
The main menu appears.



VIDEO  
AUDIO  
TIME  
SET UP  
CLOSED CAPTION  
Use Exit

- 2** Press  $\Delta$  or  $\nabla$  to select TIME.  
Then press RETURN.  
The TIME menu appears.



TIME  
CURRENT TIME SET  
ON/OFF TIMER  
CHANNEL BLOCK  
MENU  
Use Exit

- 3** Press  $\Delta$  or  $\nabla$  to select CHANNEL BLOCK.  
Then press RETURN.  
The CHANNEL BLOCK screen appears.



CHANNEL BLOCK  
EVERY SUN-SAT  
12:00M \_h CH\_\_\_\_  
MENU  
Use Exit

### Note

If the CHANNEL BLOCK display appears in black, the current time has not been set and you cannot select CHANNEL BLOCK. To set the clock, see "Setting the Clock—CURRENT TIME SET", pp. 44–45.

- 4** Press RETURN again.  
"Set the day," appears on the screen.



CHANNEL BLOCK  
EVERY SUN-SAT  
12:00M \_h CH\_\_\_\_  
MENU  
Set the day.  
Use Exit

- 5** Press  $\Delta$  or  $\nabla$  to set the day.  
Each time you press  $\Delta$  or  $\nabla$ , the days of the week change as shown in Fig. 1. (See p. 47.)  
Then press RETURN.  
"Set the time," appears on the screen.



CHANNEL BLOCK  
SUNDAY  
12:00M \_h CH\_\_\_\_  
MENU  
Set the time.  
Use Exit

- 6** Press  $\Delta$  or  $\nabla$  to set the hour.  
Each time you press  $\Delta$  or  $\nabla$ , the hour changes in sequence.  
Then press RETURN.



CHANNEL BLOCK  
SUNDAY  
8:00M \_h CH\_\_\_\_  
MENU  
Set the time.  
Use Exit

- 7** Press  $\Delta$  or  $\nabla$  to set the minutes.  
Each time you press  $\Delta$  or  $\nabla$ , the minutes change in sequence.  
Then press RETURN.  
"Set the duration," appears on the screen.



CHANNEL BLOCK  
SUNDAY  
8:45M \_h CH\_\_\_\_  
MENU  
Set the duration.  
Use Exit

- 8** Press  $\Delta$  or  $\nabla$  to set the duration of time that you want the TV remain blocked.  
Each time you press  $\Delta$  or  $\nabla$ , the duration changes from 1 to 6 in sequence.  
Then press RETURN.  
"Select the channel" appears on the screen.



CHANNEL BLOCK  
SUNDAY  
8:45M 1h CH\_\_\_\_  
MENU  
Select the channel  
Use Exit

- 9** Press  $\Delta$  or  $\nabla$  to set the channel that you want to block.  
Each time you press  $\Delta$  or  $\nabla$ , the channel number changes from 1 to 125 in sequence.



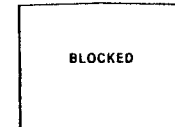
Press RETURN.  
The setting is completed.



CHANNEL BLOCK  
SUNDAY  
8:45M 1h CH 38  
MENU  
Select the channel  
Use Exit

CHANNEL BLOCK  
SUNDAY  
8:45M 1h CH 38  
MENU  
Use Exit

If you select a channel which has been blocked, the message of "BLOCKED" appears.



To clear the BLOCK setting  
Press RESET while in the CHANNEL BLOCK screen.

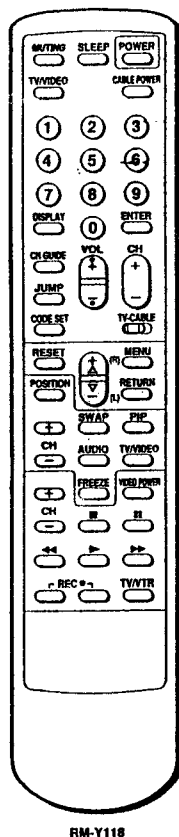
To return to the normal screen  
Press MENU.

### Notes

- If you set a new CHANNEL BLOCK by following steps 1-9, the original setting will be erased.
- If you have not set the clock correctly, CHANNEL BLOCK will not operate at the proper time. To set the clock, see "Setting the Clock—CURRENT TIME SET", pp. 44–45.



## 1-12. CUSTOMIZING THE SCREEN DISPLAY



RM-Y118

### Setting Channel Captions — CH CAPTION

Use this feature to caption up to 12 channel number displays with the matching channel call letters.

EXAMPLE: Caption channel 20 with ESPN at the caption position number 4.

- 1 Press MENU.  
The main menu appears.



► VIDEO  
AUDIO  
TIME  
SET UP  
CLOSED CAPTION  
Use  $\Delta$   $\nabla$  Exit

- 2 Press  $\Delta$  or  $\nabla$  to select SET UP.  
Then press RETURN.  
The SET UP menu appears.



SET UP  
► CABLE: CH  
AUTO PROGRAM  
CH ERASE/ADD  
CH CAPTION/GUIDE  
S VIDEO  
VIDEO LABEL  
► MENU

- 3 Press  $\Delta$  or  $\nabla$  to select CH CAPTION/GUIDE.  
Then press RETURN.  
The CH CAPTION/GUIDE screen appears.



CH CAPTION/GUIDE  
1 2 3  
4 5 6  
7 8 9  
0 10 11  
Select the letter.  
Use  $\Delta$   $\nabla$  Exit

#### Note

If the CH CAPTION display appears in black, the TV is in video mode and you cannot select CH CAPTION/GUIDE. Press TV/VIDEO to change to TV mode.

- 4 Press RETURN again.  
"Select a position." appears on the screen.



CH CAPTION/GUIDE  
1 2 3  
4 5 6  
7 8 9  
0 10 11  
Select a position.  
Use  $\Delta$   $\nabla$  Exit

- 5 Press  $\Delta$  or  $\nabla$  to select a caption position number.  
Each time you press  $\Delta$  or  $\nabla$ , the caption position number is marked in sequence.  
Then press RETURN.  
"Select the channel" appears on the screen.



CH CAPTION/GUIDE  
1 2 3  
4 5 6  
7 8 9  
0 10 11  
Select the channel  
Use  $\Delta$   $\nabla$  Exit

- 6 Press  $\Delta$  or  $\nabla$  to select the channel you want to caption.  
Each time you press  $\Delta$  or  $\nabla$ , the channel number changes from 1 to 125.  
Then press RETURN.  
"Select the letter." appears on the screen.



CH CAPTION/GUIDE  
1 2 3  
4 5 6  
7 8 9  
0 10 11  
Select the letter.  
Use  $\Delta$   $\nabla$  Exit

- 7 Press  $\Delta$  or  $\nabla$  to select the first letter.  
Each time you press  $\Delta$  or  $\nabla$ , "A-Z", "0-9", "-", and " " (blank space) appear in sequence.



CH CAPTION/GUIDE  
1 2 3  
4 5 6  
7 8 9  
0 10 11  
Select the letter.  
Use  $\Delta$   $\nabla$  Exit

- 8 Repeat step 7 to select each remaining letter.  
(For a 3-letter caption, leave a space by pressing RETURN only.)



CH CAPTION/GUIDE  
1 2 3  
4 5 6  
7 8 9  
0 10 11  
Select the letter.  
Use  $\Delta$   $\nabla$  Exit

- 9 Press RETURN.  
The setting is completed.



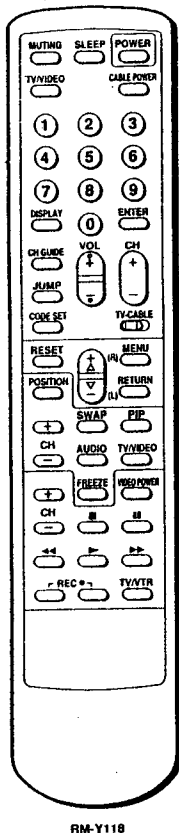
CH CAPTION/GUIDE  
1 2 3  
4 5 6  
7 8 9  
0 10 11  
Select the letter.  
Use  $\Delta$   $\nabla$  Exit

To caption other channels  
Repeat steps 4-9.

To erase unneeded captions  
Call the caption setting screen by following steps 1-5, and press RESET.

To return to the normal screen  
Press MENU.





RM-Y118

## Viewing the Captioned Channels — CH GUIDE

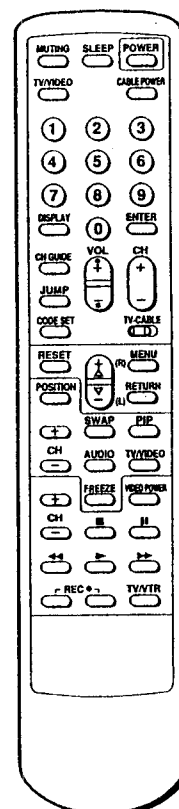
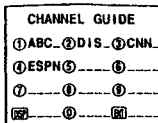
Use this feature to display the captions you set, and to select a channel directory for viewing.

- 1 Press CH GUIDE.  
A directory appears, corresponding to the directory keys on the Remote Commander.



To cancel the CHANNEL GUIDE screen  
Press CH GUIDE again.

- 2 Press the directory key of the channel you want to watch.



RM-Y118

## Setting VIDEO LABEL (except for KV-27TS29/2970RS)

Use this feature to label each input mode in order to identify the equipment connected to each input terminal.

EXAMPLE: Label VIDEO 1 IN as VHS.

- 1 Press MENU.  
The main menu appears.



- 2 Press Δ+ or ∇- to select SET UP.



Press RETURN.  
The SET UP menu appears.



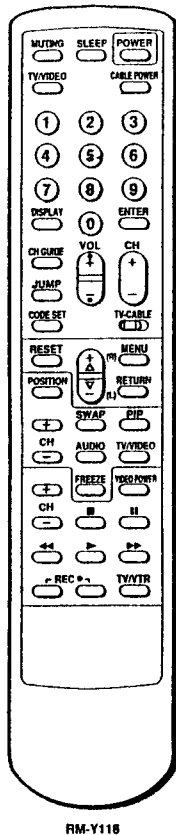
- 3 Press Δ+ or ∇- to select VIDEO LABEL.



Press RETURN.  
The VIDEO LABEL screen appears.







To return to the normal screen  
Press MENU.

**4** Press  $\Delta$  or  $\nabla$  to select the input mode you want to label.

Press RETURN.

**5** Press  $\Delta$  or  $\nabla$  to select VHS.

Each time you press  $\Delta$ , the label changes:

VIDEO 1  
VIDEO 1  $\rightarrow$  S VIDEO  $\rightarrow$  BETA  $\rightarrow$  8 mm  $\rightarrow$  VHS  $\rightarrow$  LD

VIDEO 2  
VIDEO 2  $\rightarrow$  BETA  $\rightarrow$  8 mm  $\rightarrow$  VHS  $\rightarrow$  LD

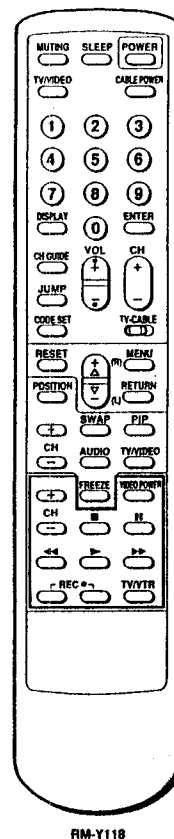
VIDEO 3  
VIDEO 3  $\rightarrow$  BETA  $\rightarrow$  8 mm  $\rightarrow$  VHS  $\rightarrow$  LD

( $\nabla$   $\rightarrow$  reverse order)

Press RETURN.

To label other input modes  
Repeat steps 4-5.

## 1-13. USING THE PRE-PROGRAMMED REMOTE COMMANDER



You can operate your video equipment and cable converter box that has an infrared remote detector with this supplied pre-programmed Remote Commander.

### Operating Sony or non-Sony Video Equipment—Pre-Programmed Function

With the supplied Remote Commander, you can operate a Sony video cassette recorder (Beta, 8 mm, VHS) or a multi disc player as well as most non-Sony video equipment connected to your TV by following the steps below.

- 1 While pressing CODE SET, press 0 - 9 to enter the manufacturer's code number (see chart on p. 56). For example, to operate a Sony 8 mm VCR, press 0, 2 and ENTER.



- 2 Use the video operating buttons on the Remote Commander to operate the video equipment.

#### Operating a VCR

To turn on or off  
To change channels  
(when watching TV programs through the VCR's tuner)

Press VIDEO POWER.  
Press CH +/-.

To record  
To play  
To stop  
To fast forward  
To rewind the tape  
To pause  
To search the picture forward and backward

Press  $\bullet$  (2 buttons simultaneously).  
Press  $\triangleright$ .  
Press  $\blacksquare$ .  
Press  $\triangleright\triangleright$ .  
Press  $\triangleleft\triangleleft$ .  
Press  $\text{II}$ .  
Press  $\triangleright\triangleright$  or  $\triangleleft\triangleleft$  during playback.

#### Operating a Video Disc Player

To play  
To stop  
To pause

Press  $\triangleright$ .  
Press  $\blacksquare$ .  
Press  $\text{II}$ .

To resume normal playback, press again.

\*This function is effective only for CAV (standard-play disc). With CLV (extended-play disc), the TV will go into the standby mode if  $\text{II}$  is pressed.

To search the picture forward and backward

Keep pressing  $\triangleright\triangleright$  or  $\triangleleft\triangleleft$  during playback.  
To resume normal playback, release the button.



Manufactures and Code Numbers (VCR/video disc player)

Manufacturer	Code number
SONY	01, 02, 03, 04
CANON	05
EMERSON	22, 30, 33
FISHER	10, 11, 12, 15
FUNAI	29
GENERAL ELECTRIC	05, 08
GOLDSTAR	25
HITACHI	07, 08
JVC	16
MAGNAVOX	05, 06, 09
DAEWOO	18, 19, 26, 27
MITSUBISHI	29
MULTITECH	16, 23, 31
NEC	05, 06
PANASONIC	05, 06
PHILCO	05, 06
PHILIPS	05, 06, 09
QUASAR	05, 06
RCA	07, 08
SAMSUNG	24, 32
SANYO	11, 15
SCOTT	21
SHARP	13, 14
SHINTOM	34
SYLVANIA	05, 06, 09
SYMPHONIC	29
TEKNIKA	28, 29
TOSHIBA	20, 21
TOTE VISION	25
ZENITH	17

The code numbers for Sony equipment are assigned as follows:

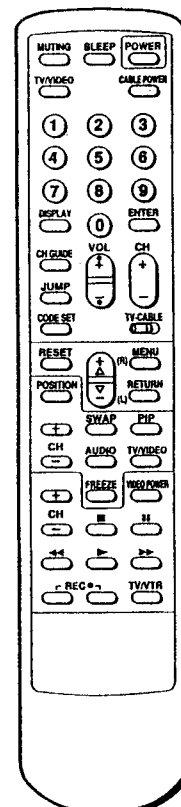
- 01 ..... Beta, ED Beta VCR
- 02 ..... 8 mm VCR
- 03 ..... VHS VCR
- 04 ..... Video disc player

#### Notes

- If more than one code number is listed for manufacturers other than Sony, try entering them one by one, until you come to the correct code for your equipment.
- If the video equipment does not have a certain function, the corresponding button on this Remote Commander will not operate.
- In some rare cases, you may not be able to operate your non-Sony video equipment with the supplied Remote Commander. This is because your equipment may use a code that is not provided with this Remote Commander. In this case, please use the equipment's own remote control unit.

#### CAUTION

When you remove the batteries from the Remote Commander, all the settings will revert to the Sony Beta setting. Reset the codes by following the steps on p. 55.



RM-Y118

Manufactures and Code Numbers (cable box)

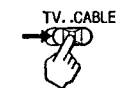
MANUFACTURER	CODE
JERROLD	60, 61, 62, 63, 64, 65
PIONEER	69, 70
SCIENTIFIC ATLANTA	66, 67
TOCOM	71, 72
ZENITH	68

#### Operating a Cable Converter Box

Follow these instructions to set the manufacturer's code which will enable you to operate a connected cable converter box with the pre-programmed Remote Commander.

EXAMPLE: Operate a connected Zenith cable converter box.

- 1 Set the TV/CABLE selector to CABLE.



#### Notes

- If more than one code number is listed, try entering them one by one until you come to the correct code for your equipment.
- If you enter a new code number, the code number you previously entered at that setting is erased.
- In some rare cases, your equipment may use a code that is not provided with this Remote Commander and you may not be able to operate your cable converter box with the supplied Remote Commander. In this case, use the equipment's own remote control unit.

- 2 While pressing CODE SET, press 6 and 8 (Zenith's code number - see chart below) and ENTER.

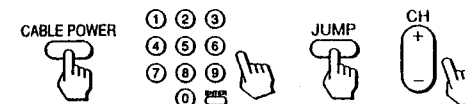


A long beep sound's, indicating that the code has been set.

#### Note

If you press a wrong code or if the code has not been set, four short beeps sound. Repeat step 2 to set the code.

- 3 Use CABLE POWER and the TV control buttons (0 - 9, ENTER, JUMP and CH +/-) to operate the cable converter box.



#### To operate the TV

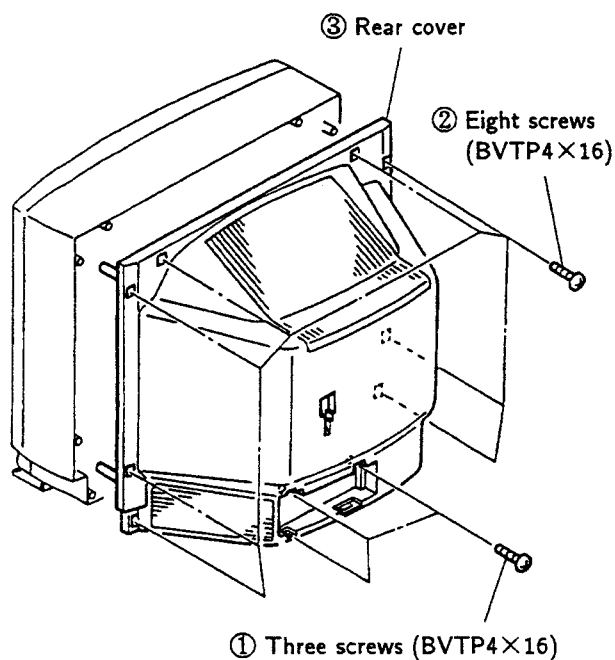
Set the TV/CABLE selector to TV, then use the TV control buttons to control the TV.

For more details on operating the cable box  
Refer to the operating instructions that come with the cable box.

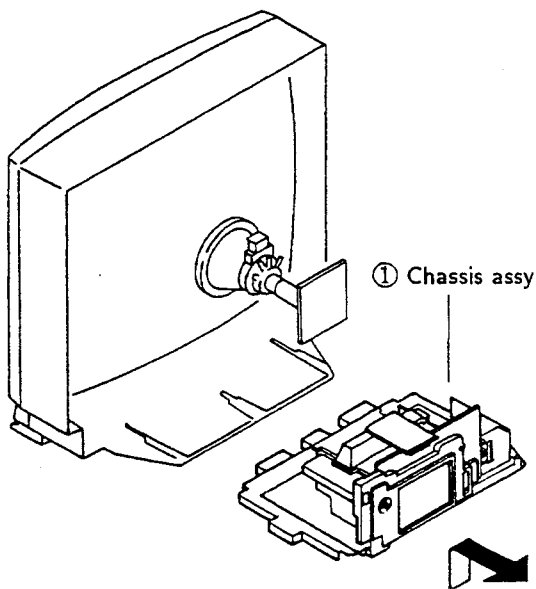


## SECTION 2 DISASSEMBLY

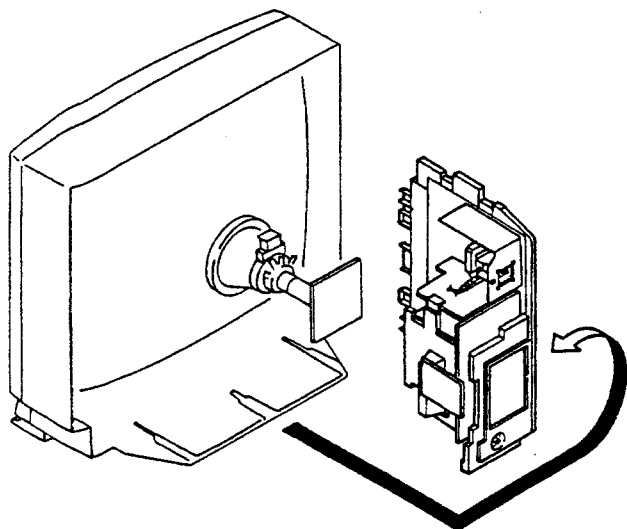
### 2-1. REAR COVER REMOVAL



### 2-2. CHASSIS ASSY REMOVAL

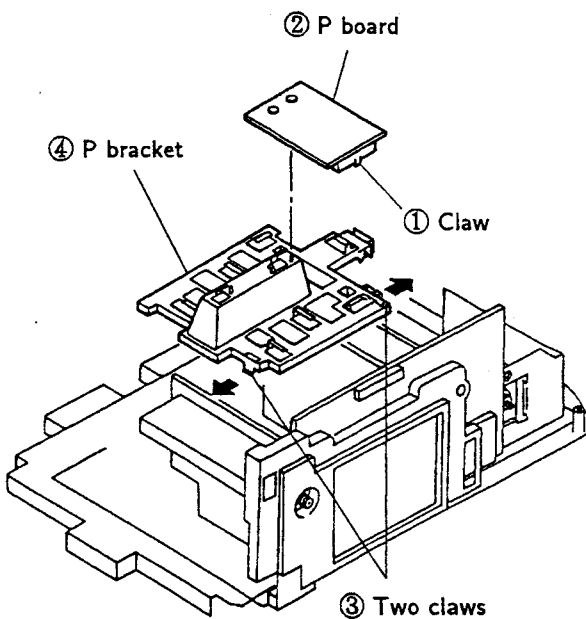


### 2-3. SERVICE POSITION



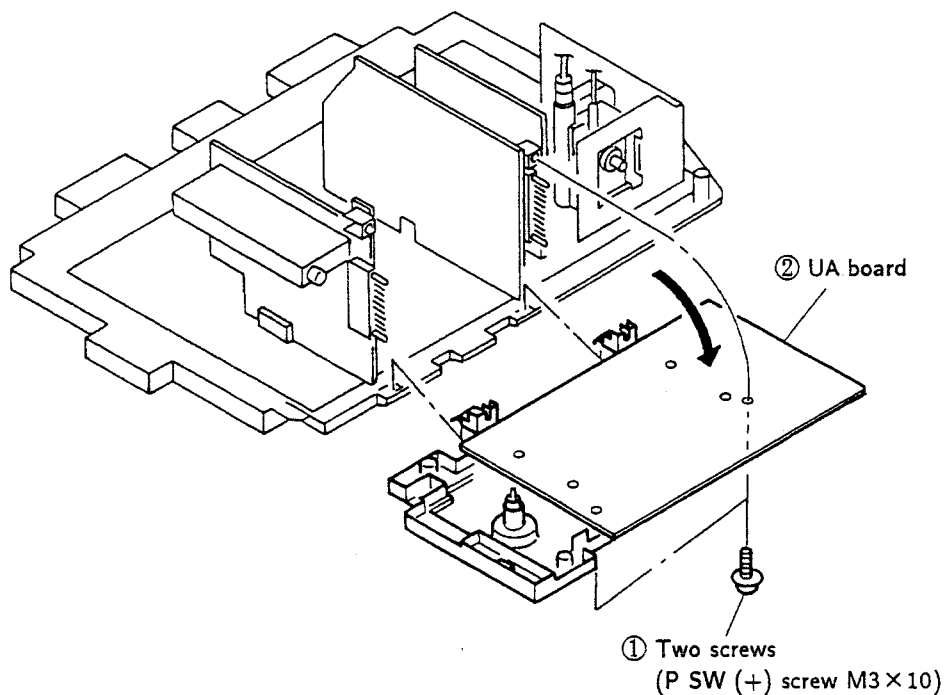
### 2-4. P BOARD AND P BRACKET REMOVAL

(KV-32TS46 (UC/CND)/32TS36 (US/CND)  
 /27TS36 (US/CND) only)

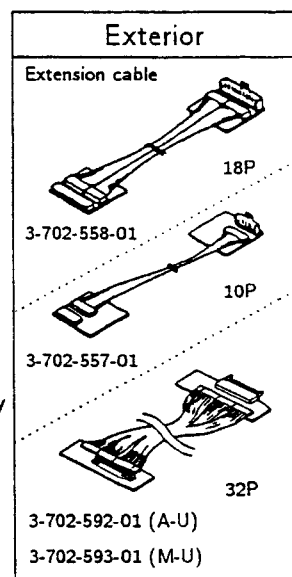
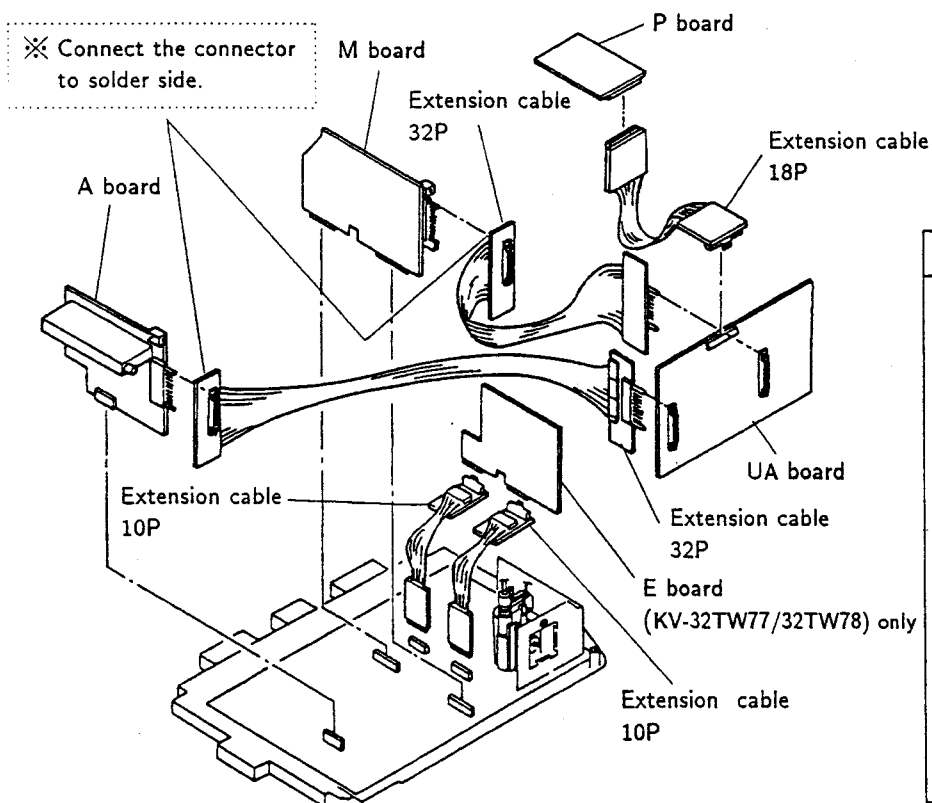




## 2-5. UA BOARD REMOVAL



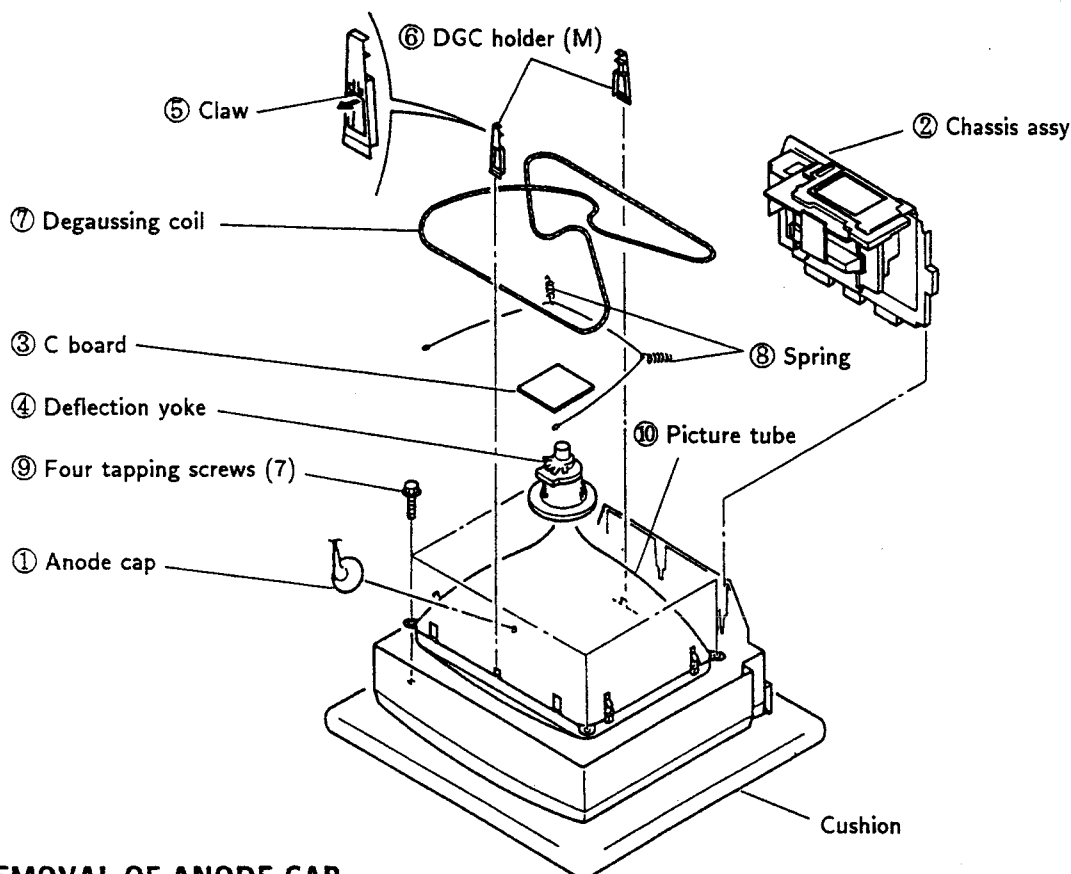
## 2-6. EXTENSION CABLE





## 2-7. PICTURE TUBE REMOVAL (1)

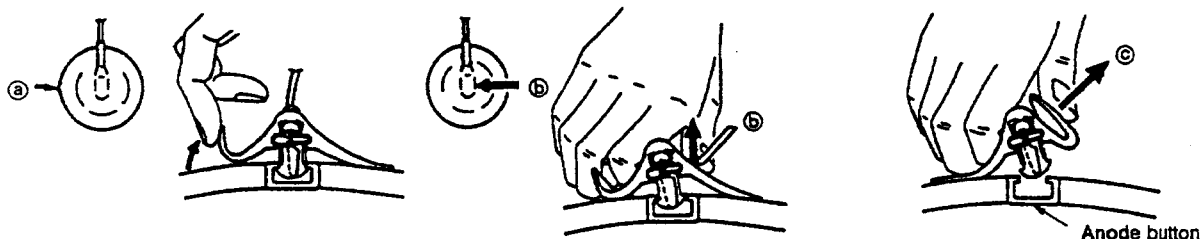
(KV-27TS36 (US/CND)/27TS32/27TS29 (US/CND) only)



### • REMOVAL OF ANODE-CAP

NOTE : Short circuit the anode of the picture tube and the anode cap to the metal chassis, CRT chield or carbon painted on the CRT, after removing the anode.

### • REMOVING PROCEDURES



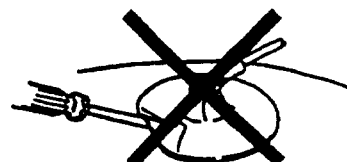
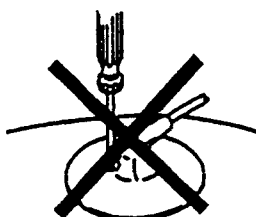
① Turn up one side of the rubber cap in the direction indicated by the arrow ㉓.

② Using a thumb pull up the rubber cap firmly in the direction indicated by the arrow ㉓.

③ When one side of the rubber cap is separated from the anode button, the anode-cap can be removed by turning up the rubber cap and pulling up it in the direction of the arrow ㉓.

### • HOW TO HANDLE AN ANODE-CAP

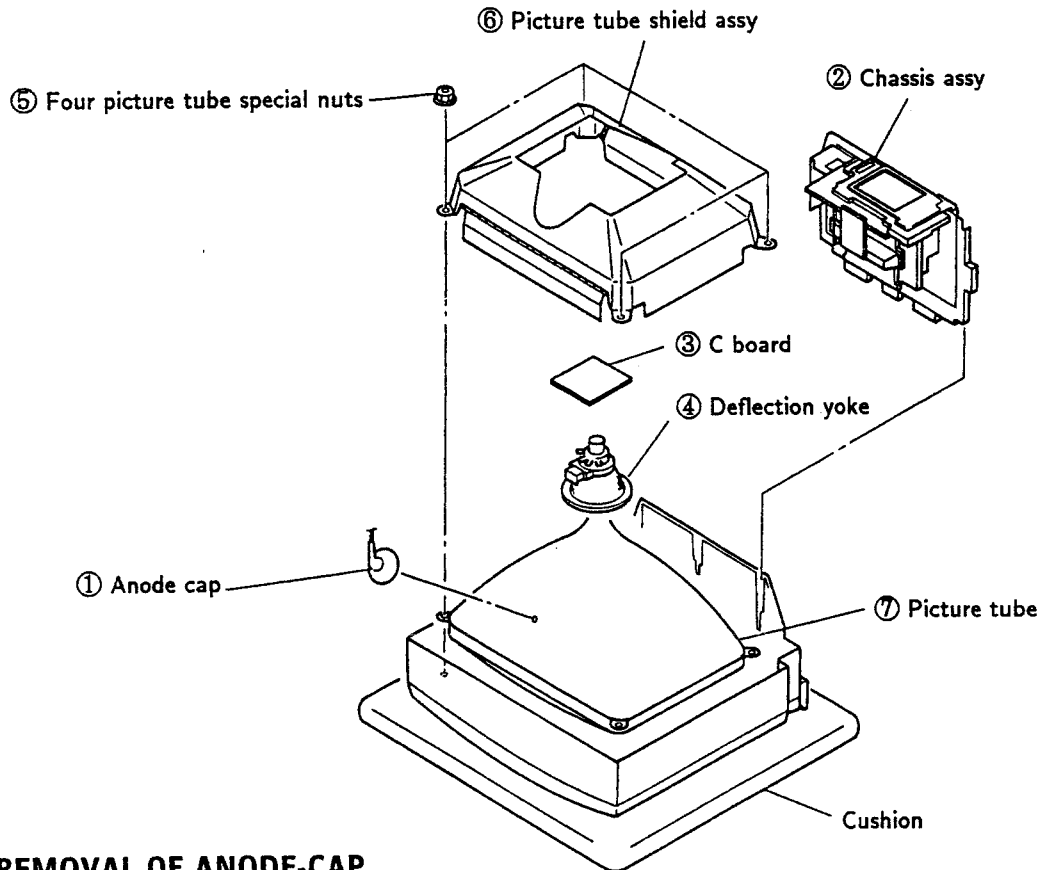
- ① Don't hurt the surface of anode-caps with sharp shaped material!
- ② Don't press the rubber hardly not to hurt inside of anode-caps!  
A material fitting called as shatter-hook terminal is built in the rubber.  
Don't turn the foot of rubber over hardly!  
The shatter-hook terminal will stick out or hurt the rubber.
- ③





## 2.7. PICTURE TUBE REMOVAL (2)

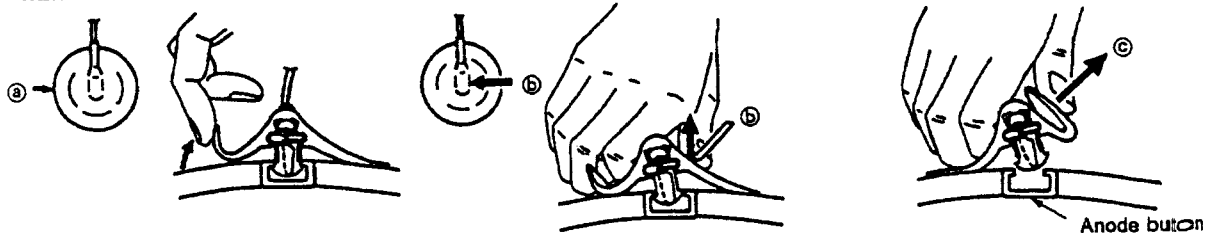
(KV-32TS46 (US/CND)/32TS36 (US/CND) only)



### • REMOVAL OF ANODE-CAP

NOTE : Short circuit the anode of the picture tube and the anode cap to the metal chassis, CRT shield or carbon painted on the CRT, after removing the anode.

### • REMOVING PROCEDURES



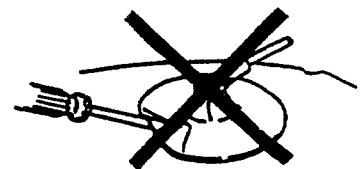
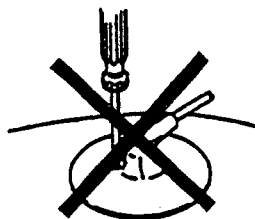
① Turn up one side of the rubber cap in the direction indicated by the arrow ㉑.

② Using a thumb pull up the rubber cap firmly in the direction indicated by the arrow ㉒.

③ When one side of the rubber cap is separated from the anode button, the anode-cap can be removed by turning up the rubber cap and pulling up it in the direction of the arrow ㉓.

### • HOW TO HANDLE AN ANODE-CAP

- ① Don't hurt the surface of anode-caps with sharp shaped material!
- ② Don't press the rubber hardly not to hurt inside of anode-caps!  
A material fitting called as shatter-hook terminal is built in the rubber.
- ③ Don't turn the foot of rubber over hardly!  
The shatter-hook terminal will stick out or hurt the rubber.





## 2-8. REPAIR OF CHIP COMPONENT CIRCUIT BOARD

### 2-8-1. POINTS OF COMPONENT REMOVAL

#### Handling of blower type soldering iron

If hot blast is too strong or applied from a slanting direction, small components and solder near the component being removed can be blown off. Do not use blower type without temperature control.

### 2-8-2. NOTES ON SOLDERING FOR CHIP COMPONENTS

- 1) During soldering a chip component, if a soldering iron is applied for a long time, the heat may damage the component or cause pattern peeling.
- 2) Do not reuse a removed component. The characteristics of such a component may deteriorate.
- 3) Use wire solder containing silver ( $\phi$  0.3 or  $\phi$  0.6).  
(The pin electrodes of the laminated chip capacitor are silver +palladium, so if wire solder which does not contain silver is used, the silver of the pin electrode will be sucked into the solder.)

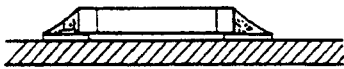
### 2-8-3. REMOVAL AND MOUNTING OF COMPONENTS

#### Chip resistor and chip capacitor

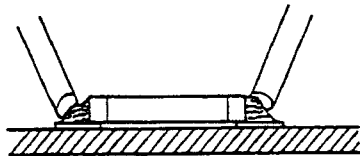
#### REMOVAL

- Using two soldering irons

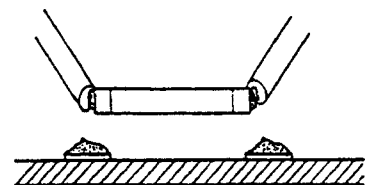
#### 1) Mounted state



#### 2) Melt the solder.

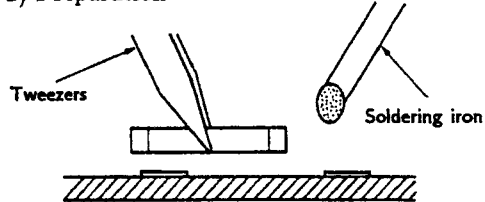


#### 3) Remove the component.



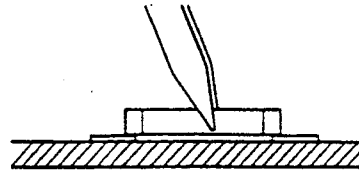
#### SOLDERING

#### 1) Preparation

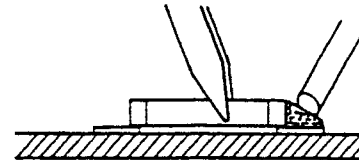


#### 2) Location

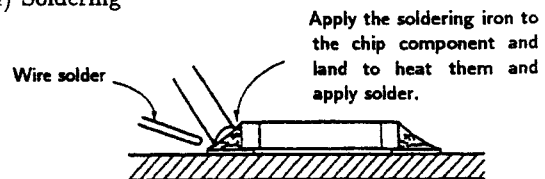
Be careful not to misposition.



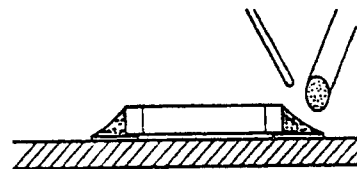
#### 3) Tack soldering and flux application



#### 4) Soldering



#### 5) Soldering (Fix the fillet.)



#### 6) Visual inspection

Check for the following defects :

- No-soldered part
- Bridge (to other components or lands)
- Mispositioning
- Other defects

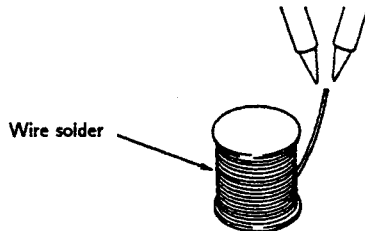


## 2-8-4. MINI-TRANSISTOR

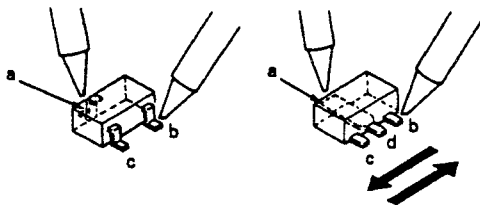
### REMOVAL

- Using two soldering irons

- 1) Put a little solder on the tip of two soldering irons.



- 2) Apply the tip of one soldering iron to the point "a" and the other to the points "b" → "c" (or "b" → "d" → "c") and move the component in the directions indicated by arrows in the figure to remove it.

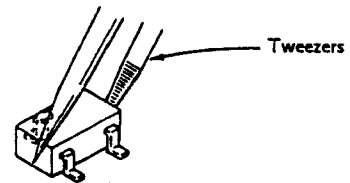


### MOUNTING

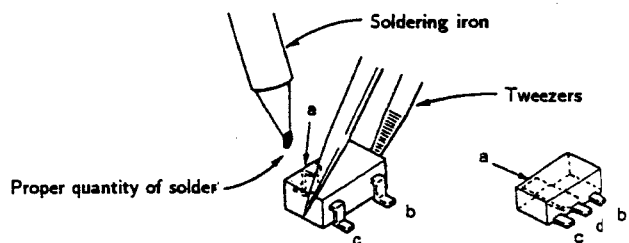
- 1) Apply a little flux to the land with a brush.



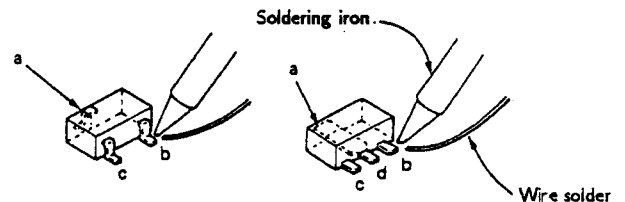
- 2) Place the component in position using tweezers.



- 3) Put a little solder on the tip of the soldering iron and solder the point "a" to fix the component.



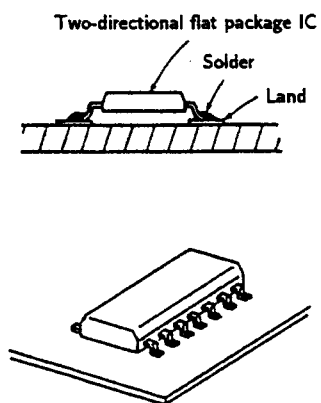
- 4) Bring the tip of the soldering iron and the wire solder close to the point to be soldered. Solder the points "b" → "c" (or "b" → "d" → "c") in order.



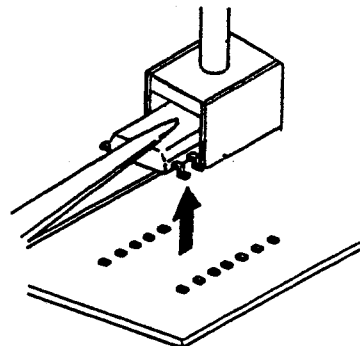


## 2-8-5. TWO-DIRECTIONAL FLAT PACKAGE IC

### MOUNT CONDITION

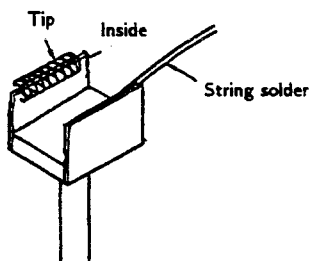


- When the solder melts, lift the IC with a pair of tweezers and remove.

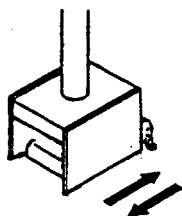


### REMOVAL

- Apply some solder on the inside and the tip of the iron tip jig.

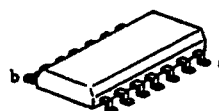


- Place the iron tip jig over the IC, and move the jig to and fro as shown in the figure.

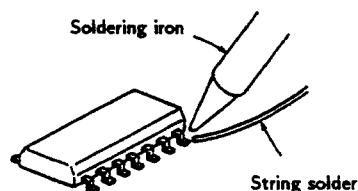


### INSTALLATION

- Place the two-directional flat package IC at the appointed position, solder pins a and b on the diagonal, and fasten it.



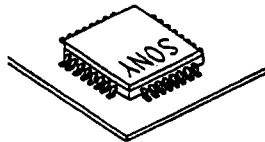
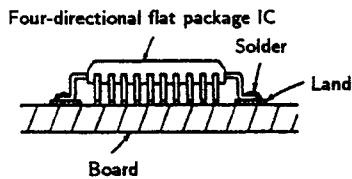
- Solder the remaining pins with the soldering iron.





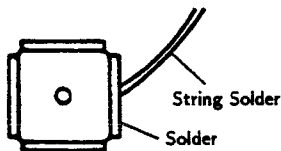
## 2-8-6. FOUR-DIRECTIONAL FLAT PACKAGE IC

### MOUNT CONDITION

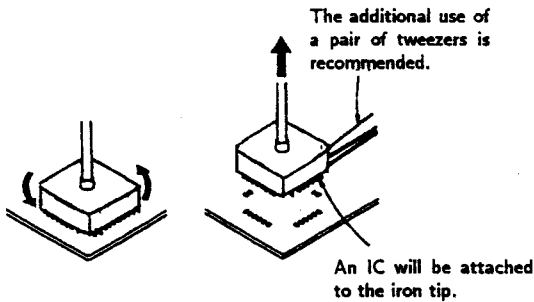


### REMOVAL

- 1) Apply solder on the tip of the iron tip jig.



- 2) Place the iron tip jig over the IC, wait about two to three seconds, rotate the iron slightly and lift it up.



Note: For flat ICs of above 52P, the IC may not be completely attracted when the iron tip jig is lifted up. In these cases, use a pair of tweezers to remove.

### INSTALLATION

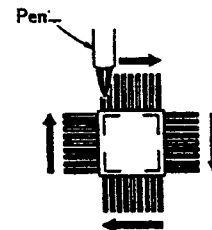
- 1) Place the four-directional flat package IC at the appointed position.



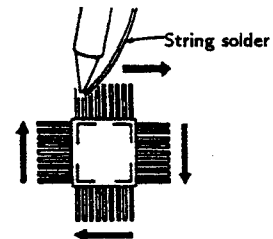
- 2) Apply a slight amount of solder on the iron tip, and solder the three sections in the order of a → b → c, and fix.



- 3) Apply a slight amount of flux with a pen on all four directions.

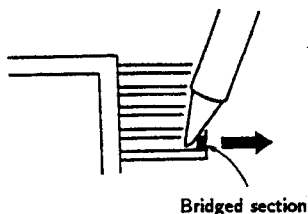


- 4) Apply solder on the iron tip and the string solder, and slide and solder in the directions of the arrows.



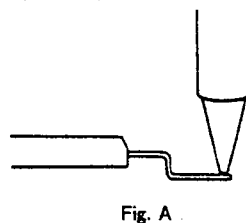


Note: 1) After soldering, if there are bridged sections, correct by sliding the soldering iron in the direction of the arrow.

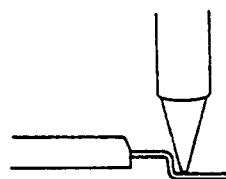


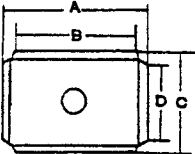
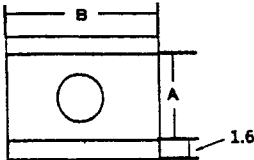
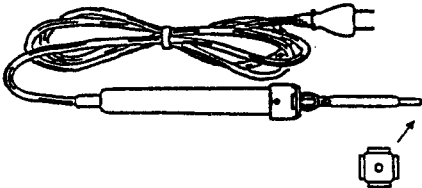
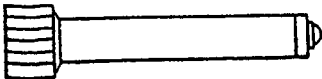
If the bridges cannot be corrected using the above method, apply some flux with a pen and try again.

2) Soldering can be carried out more easily by sliding the iron tip near the tip of the IC leg. (Fig. A)



Be careful not to slide the bent sections of the leg as shown in Fig. B as soldering bridges will be formed.



Exterior	Description	Part No.	Measure (mm)			
			A	B	C	D
	jig for removing 4-sided flat package IC	3-702-554-01	12.5	9.5	12.5	9.5
		" 11	15.5	12.5	15.5	12.5
		" 21	16.3	13.3	16.3	13.3
		" 31	17.0	14.0	17.0	14.0
		" 41	23.0	20.0	17.0	14.0
		" 51	20.0	17.0	20.0	17.0
	jig for removing 2-sided flat package IC	3-702-555-01	6.0	5.0		
		" 11	6.0	10.0		
		" 21	7.0	12.5		
		" 31	9.0	15.2		
		" 41	9.0	18.0		
	soldering iron	3-702-552-01	55W 60g length 210mm			
	soldering holder	3-702-553-01				



## SECTION 3 SET-UP ADJUSTMENTS

- The following adjustments should be made when a complete realignment is required or a new picture tube is installed.
- These adjustments should be performed with rated power supply voltage unless otherwise noted.

Controls and switch should be set as follows unless otherwise noted :

PICTURE control . . . . . RESET  
BRIGHTNESS control . . . . . center

Perform the adjustments in order as follows :

1. Beam Landing
2. Convergence
3. Focus
4. White Balance

**Note :** Test Equipment Required.

1. Color-bar/Pattern Generator
2. Degausser
3. Oscilloscope

### Preparations :

- In order to reduce the influence of geomagnetism on the set's picture tube face it east or west.
- Switch on the set's power and degauss with the degausser.

### 3-1. BEAM LANDING

1. Input the white signal with the pattern generator.  
Contrast } normal  
Brightness }
2. Set the pattern generator raster signal to green.
3. Move the deflection yoke to the rear and adjust with the purity control so that the green is at the center and the blue and the red take up equally sized areas on each side.  
(See Figures 3-1 through 3-3.)
4. Move the deflection yoke forward and adjust so that entire screen is green. (See Figure 3-1.)
5. Switch the raster signal to blue, then to red and verify the condition.
6. When the position of the deflection yoke has been decided, fasten the deflection yoke with the screws.
7. If the beam does not land correctly in all the corners, use a magnet to adjust it.  
(See Figure 3-4.)

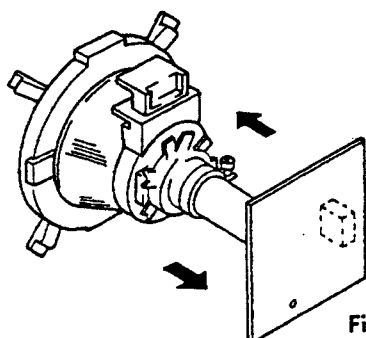


Fig.3-1

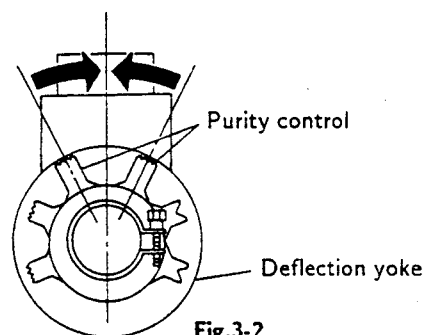


Fig.3-2

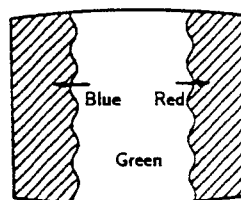


Fig.3-3

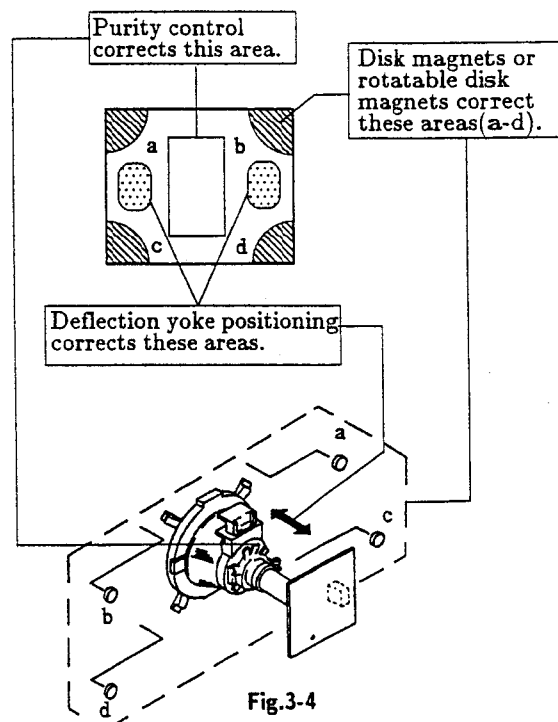


Fig.3-4

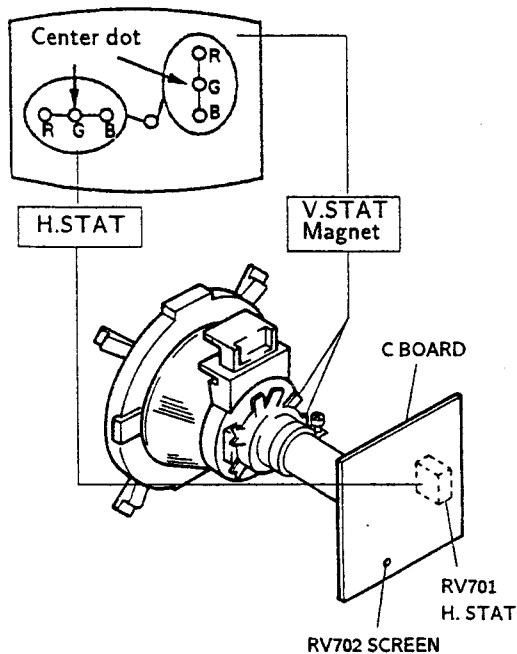


### 3-2. CONVERGENCE

#### Preparation :

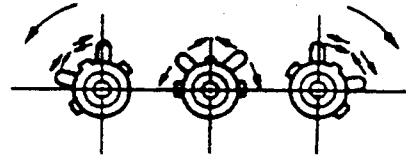
- Before starting this adjustment, adjust the focus, horizontal size, and vertical size.
- Minimize the brightness setting.
- Provide dot pattern.

#### (1) Horizontal and Vertical Static Convergence

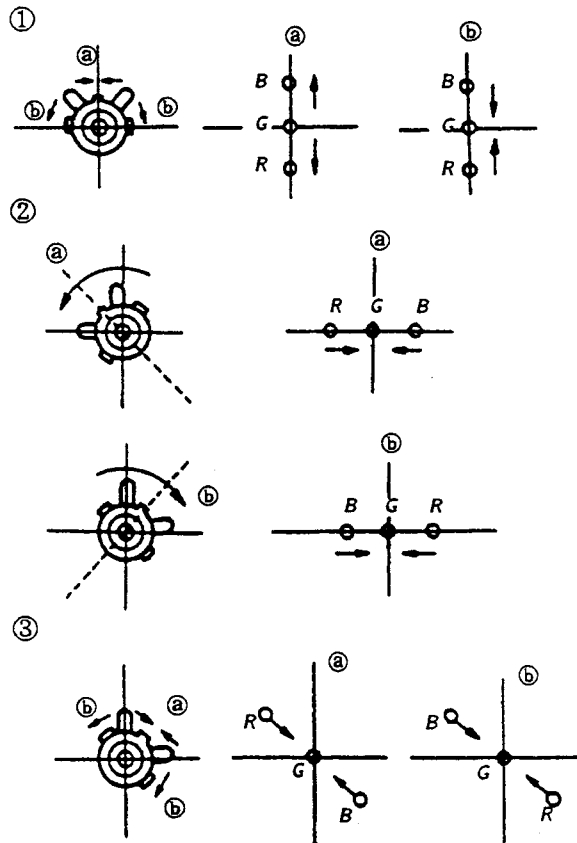


1. (Moving horizontally), adjust the H.STAT control so that the red, green, and blue points are on top of each other at the center of the screen.
2. (Moving vertically), adjust the V.STAT magnet so that the red, green, and blue points are on top of each other at the center of the screen.
3. If the H.STAT variable resistor cannot bring the red, green, and blue points together at the center of the screen, adjust the horizontal convergence with the H.STAT variable resistor and the V. STAT magnet in the manner given below.  
(In this case, the H.STAT variable resistor and the V. STAT magnet influence each other)

- Tilt the V.STAT magnet and adjust the static convergence by opening or closing the V.STAT magnet.

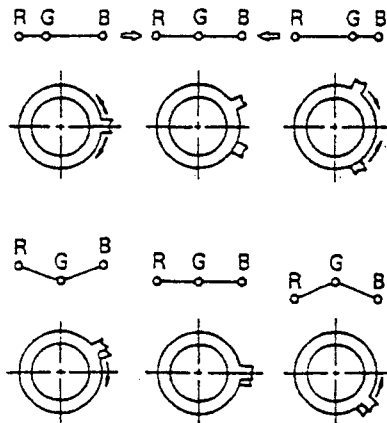


4. If the V.STAT magnet is moved in the direction of the ① and ② arrows, the red, green, and blue points move as shown below.





• Operation of BMC (Hexapole) Magnet



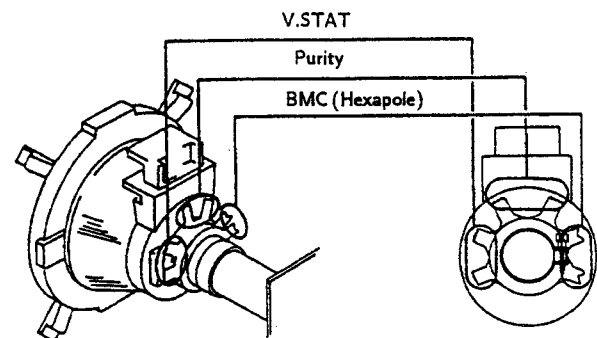
- The respective dot positions resulting from moving each magnet interact, so be sure to perform adjustment while tracking.  
Use the H.STAT VR to adjust the red, green, and blue dots so they coincide at the center of screen (by moving the dots in the horizontal direction).

(2) Dynamic Convergence Adjustment

Preparations :

- Before starting this adjustment, adjust the horizontal static convergence and the vertical static convergence.

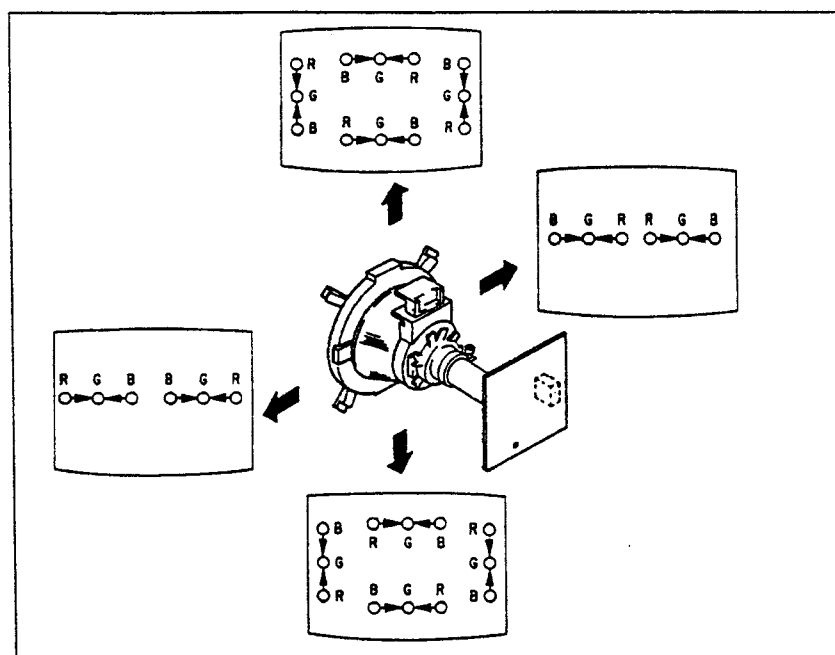
1. Slightly loosen the deflection yoke screws.
2. Remove the deflection yoke spacer.



• Y separation axis correction magnet adjustment

1. Receive the cross-hatch signal, and adjust [PLX] to "MIN" and [BRT] to "standard".
2. Adjust the deflection yoke to the upright condition when it hits the CRT.
3. Adjust so that the Y separation axis correction magnet on the neck assembly is symmetrical at the top and bottom (open state).
4. Return the deflection yoke to its original position.

3. Move the deflection yoke as shown in the figure below and optimize the convergence.
4. Tighten the deflection yoke screws.
5. Install the deflection yoke spacer.



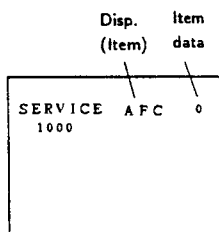


### (3) Dynamic Convergence Circuit Adjustment (32 inch only)

#### SERVICE MODE PROCEDURE

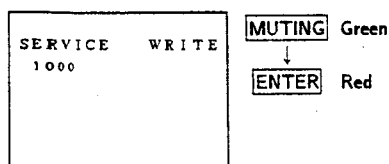
- Standby mode.(Power off)
- DISPLAY** → **5** → **VOL (+)** → **POWER** on the Remote Commander. (Press each button within a second.)

#### SERVICE ADJUSTMENT MODE IN

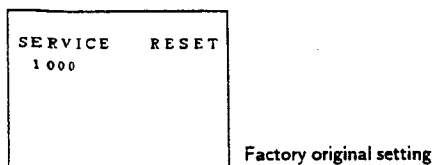


- The CRT displays the item Being adjusted.
- Press **1** or **4** on the Remote Commander to select the item.
- Press **3** or **6** on the Remote Commander to change the data.
- Press **MUTING** then **ENTER** to write into memory.

#### SERVICE ADJUSTMENT MODE MEMORY



- Press **8** then **ENTER** on the Remote Commander to initialize.



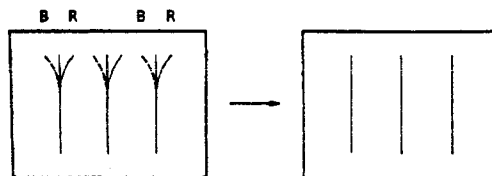
- Turn set off and on to exit.

- Set to Service Mode.
- Input a cross-hatch signal.
- Press **1** and **4** select an item of adjustments.
- Adjust **3** and **6** to the best picture.

No.	Disp.	Item	Ave.Data
39	UYBO	Upper Y-Bow	31
40	LYBO	Lower Y-Bow	25
41	HAMP	H. Amp	33
42	HTIL	H. Tilt	33
43	UCBO	Upper C-Bow	38
44	UTIL	Upper Tilt	40
45	LCBO	Lower C-Bow	41
46	LTIL	Lower Tilt	46
47	DCSH	DC Shift	37

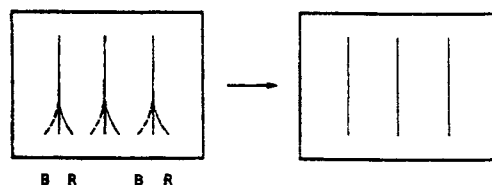
#### U. YBOW

Select UYBO with **1** and **4**



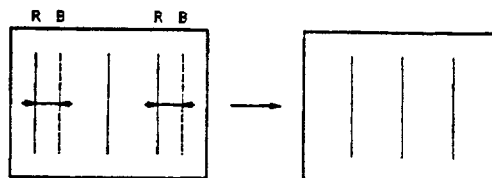
#### L. YBOW

Select LYBO with **1** and **4**



#### H. AMP

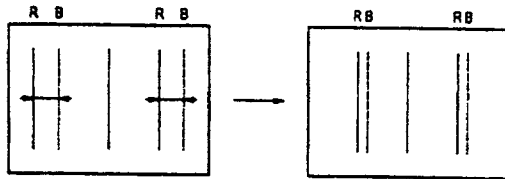
Select HAMP with **1** and **4**



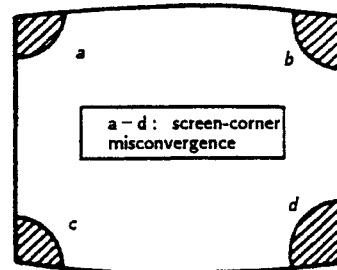


#### H. TILT

Select HTILT with 1 and 4

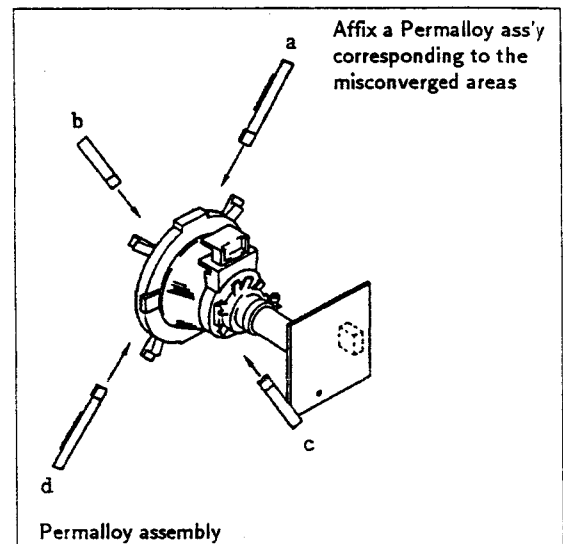
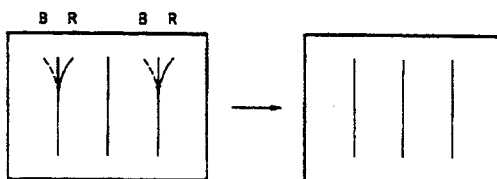


#### (4) Screen-corner Convergence



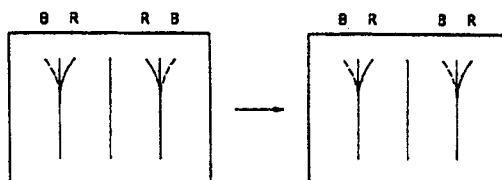
#### U. CBOW

Select UCBO with 1 and 4



#### U. TILT

Select UTIL with 1 and 4

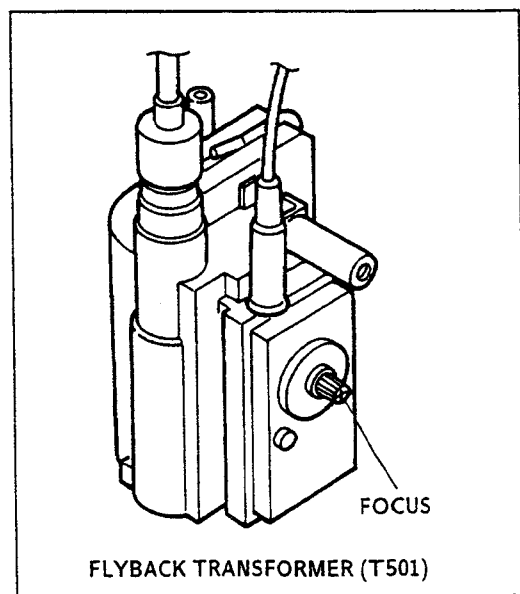
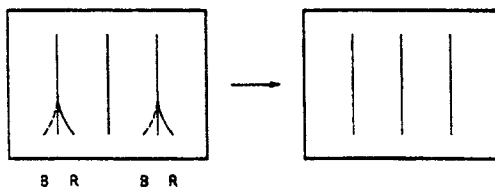


### 3-3. FOCUS ADJUSTMENT

Adjust FOCUS control on the flyback transformer for a best focus.

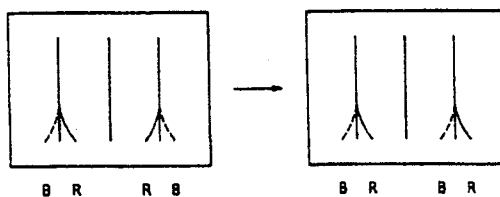
#### L. CBOW

Select LCBO with 1 and 4



#### L. TILT

Select L. TIL with 1 and 4





### 3-4. G2 (SCREEN) AND WHITE BALANCE ADJUSTMENTS

#### 1. G2 (SCREEN) ADJUSTMENT (RV 702)

1. Set the PICTURE and BRIGHTNESS to normal.
2. Confirm G1 voltage is within  $30.0 \pm 5$  V.
3. Apply DC voltage of 180 V to the cathodes of R, G and B from DC stabilized power source.
4. While watching the picture, adjust the G2 control (RV 702) to the just the retrace line disappears.

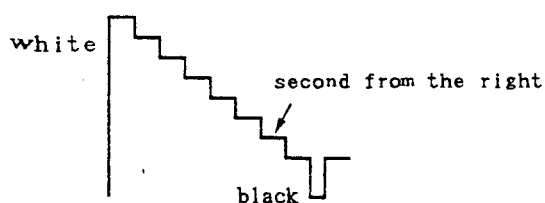
#### 2. WHITE BALANCE ADJUSTMENTS

No.	Disp.	Item	Ave. Data
14	GAMP	Green Amp	20
15	BAMP	Blue Amp	17
16	GCUT	Green Cut-off	7
17	BCUT	Blue Cut-off	8
22	SBRT	Sub Bright	35

1. Input an entire white signal.
2. Set to service adjustment mode.
3. Set the PICTURE and BRIGHT to minimum.
4. Adjust with SBRT if necessary.
5. Select G CUT and B CUT with **[1]** and **[4]**.
6. Adjust with **[3]** and **[6]** for the best white balance.
7. Set the PICTURE and BRIGHT to maximum.
8. Select GAMP and BAMP with **[1]** and **[4]**.
9. Adjust with **[3]** and **[6]** for the best white balance.
10. Write into the memory by pressing **[MUTING]** then **[ENTER]**.

#### 3. SUB BRIGHT ADJUSTMENT

1. Set to service mode.
2. Input a staircase signal of black and white from the pattern generator.
3. BRIGHTNESS ... RESET  
 PICTURE ..... minimum
4. Select SBRT with **[1]** and **[4]**, and adjust SUB BRIGHT level with **[3]** and **[6]** so that the stripe second from the right is dimly lit.





## SECTION 4 SAFETY RELATED ADJUSTMENTS

KV-27TS29/27TS32/27TS36  
RM-Y116 RM-Y117 RM-Y118  
KV-32TS36/32TS46  
RM-Y116 RM-Y118  
SA-W200

KV-27TS29/27TS32/27TS36  
RM-Y116 RM-Y117 RM-Y118  
KV-32TS36/32TS46  
RM-Y116 RM-Y118  
SA-W200

### ☒ R511 CONFIRMATION METHOD (HOLD-DOWN CONFIRMATION) AND READJUSTMENTS

The following adjustments should always be performed when replacing the following components (marked with ☒ on the schematic diagram).  
PM501, R338, R511, R632, R645, R650

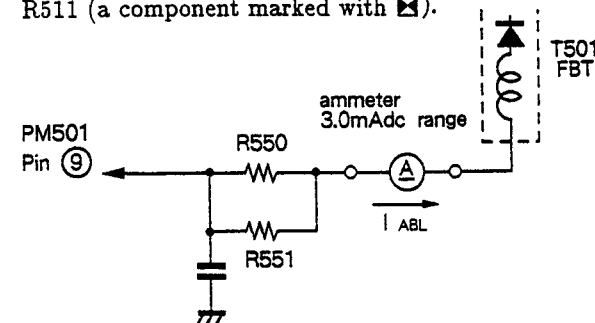
- ①
  1. Preparation before confirmation
    - 1) Remove R635 on the D board and connect a variable resistor (RV1: about 22k $\Omega$ ) between pin ① of IC601 and B+ line.
    - 2) Supply 130 $\pm$ 2.0V AC to with variable auto-transformer.
  2. Hold-down operation confirmation
    - 1) Turn the POWER switch ON, and receive entirely white signals and adjust ABL current to 1760 $\pm$ 50 $\mu$ A with PICTURE and BRIGHT etc controls.
    - 2) Increase B+ line voltage gradually by adjusting the resistor of RV1. Confirm that the minimum voltage is less than 142.5V DC (27 inch) 140.0V DC (32 inch) whereby the raster disappears during operation of hold-down circuit.

**NOTE:** When the hold-down circuit starts operating, switch OFF the POWER of the set immediately.

  - 3) Turn the POWER switch ON, and receive dot signals and adjust ABL current to 160 $\pm$ 50 $\mu$ A with PICTURE and BRIGHT etc controls.
  - 4) Increase B+ line voltage gradually by adjusting the resistor of RV1. Confirm that the minimum voltage is less than 145.0V DC (27 inch), 143.5V DC (32 inch) whereby the raster disappears during operation of hold-down circuit.
- NOTE:** When the hold-down circuit starts operating, switch OFF the POWER of the set immediately.

#### 3. Hold-down readjustment

When step 2 is not satisfied, readjustment should be performed by altering the resistance value of R511 (a component marked with ☒).



### ☒ R524 CONFIRMATION METHOD (HOLD-DOWN CONFIRMATION) AND READJUSTMENTS

The following adjustments should always be performed when replacing the following components (marked with ☒ on the schematic diagram).  
IC601, PM501, D504, C598, R338, R509, R524, R632, R635, R645, T501

- ②
  1. Preparation before confirmation
    - 1) Turn the POWER switch ON, and receive entirely white signals and set the PICTURE and BRIGHT controls to maximum.
    - 2) Confirm that voltage of the check terminal of TP-85 (D BOARD) is more than 114.0V DC (27 inch) 122.3V DC (32inch) when the set is operating normally with 120.0 $\pm$ 2.0V AC supply.
  2. Hold-down operation confirmation
    - 1) Turn the POWER switch ON, and receive entirely white signals and adjust ABL current to 1760 $\pm$ 50 $\mu$ A with PICTURE and BRIGHT etc controls.
    - 2) Apply DC voltage of over 130.0V DC gradually to the check terminal of TP-85 (D BOARD) via 1T40 from the DC stabilized power source. Confirm that the minimum voltage is less than 137.5V DC (27inch) 143.5V DC (32inch) whereby the raster disappears during operation of hold-down circuit.

**NOTE:** When the hold-down circuit starts operating, switch OFF the POWER of the set immediately.

  - 3) Turn the POWER switch ON, and receive dot signals and adjust ABL current to 160 $\pm$ 50 $\mu$ A with PICTURE and BRIGHT etc controls.
  - 4) Apply DC voltage of over 130.0V gradually to the check terminal of TP-85 (D BOARD) via 1 T40 from the DC stabilized power source. Confirm that the minimum voltage is less than 138.0V DC (27inch) 144.1V DC (32inch) whereby the raster disappears during operation of hold-down circuit.
- NOTE:** When the hold-down circuit starts operating, switch OFF the POWER of the set immediately.

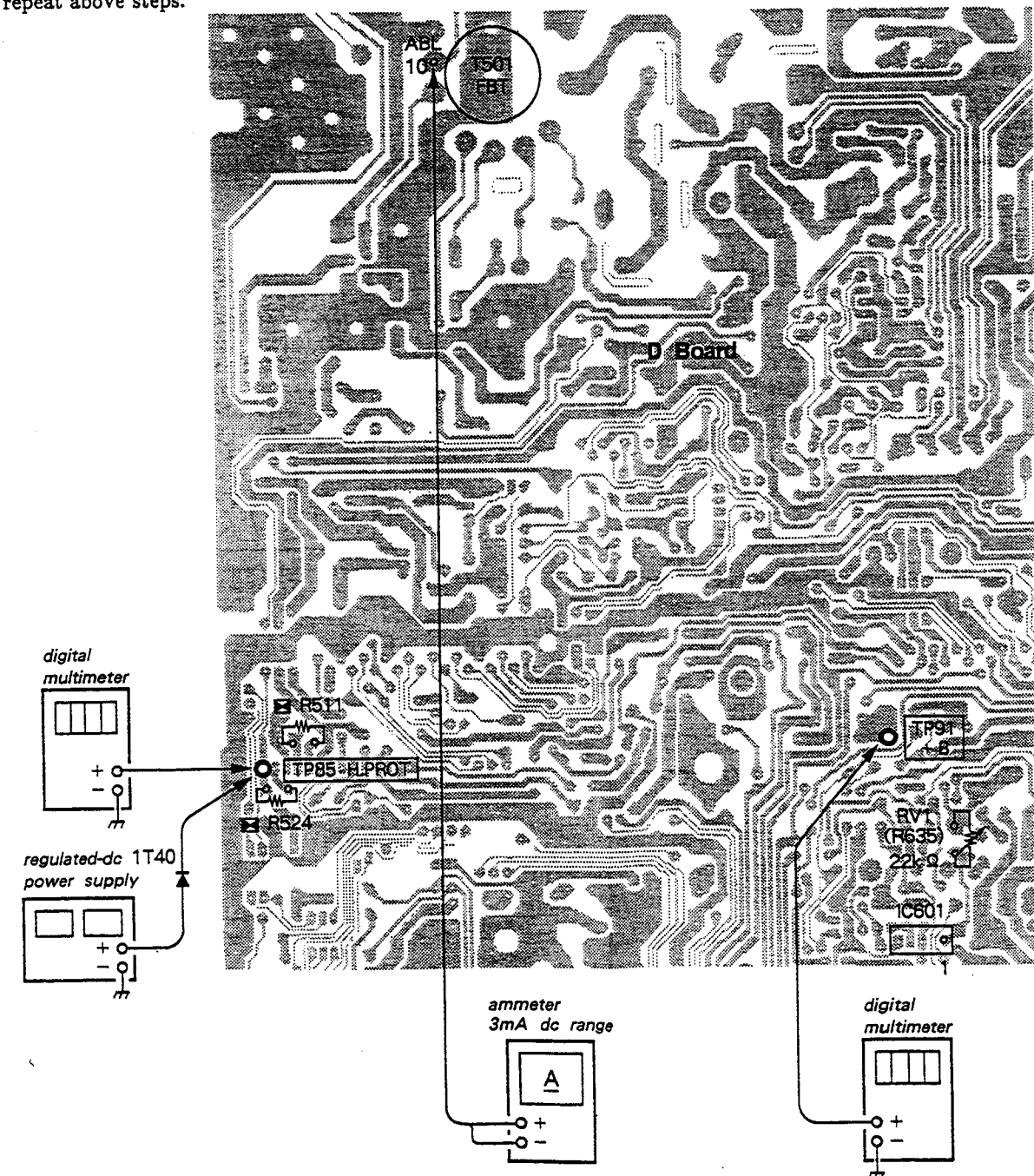
#### 3. Hold-down readjustment

When step 2 is not satisfied, readjustment should be performed by altering the resistance value of R524 (a component marked with ☒).

### B+ VOLTAGE CONFIRMATION

The following adjustments should always be performed when replacing IC601 and R635.

- 1) Supply 130 $\pm$ 2.0 V AC to with variable autotransformer.
- 2) Receive entirely monoscope signal.
- 3) Set the PICTURE control and the BRIGHT controls in to initial reset.
- 4) Confirm the voltage of TP91 is less than 137.0V DC.
- 5) If step 4) is not satisfied, replace IC601 and R635 repeat above steps.





SECTION 5  
CIRCUIT ADJUSTMENTS

KV-27TS29/27TS32/27TS36	KV-27TS29/27TS32/27TS36
RM-Y116 RM-Y117 RM-Y118	RM-Y116 RM-Y117 RM-Y118
KV-32TS36/32TS46	KV-32TS36/32TS46
RM-Y116 RM-Y118 SA-W200	RM-Y116 RM-Y118 SA-W200

5-1. ELECTRICAL ADJUSTMENT BY REMOTE COMMANDER

Use of Remote Commander can be performed circuit adjustments about this model.

NOTE : Test Equipment Required.

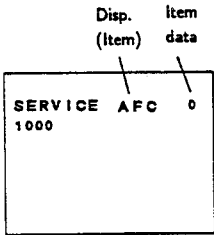
1. Pattern Generator
2. Frequency counter
3. Digital multimeter
4. Audio OSC

1. METHOD OF SETTING THE SERVICE  
ADJUSTMENT MODE

SERVICE MODE PROCEDURE

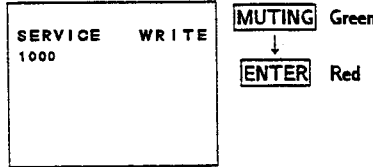
1. Standby mode.(Power off)
2. **DISPLAY** → **5** → **VOL (+)** → **POWER** on the Remote Commander. (Press each button within a second.)

SERVICE ADJUSTMENT MODE IN

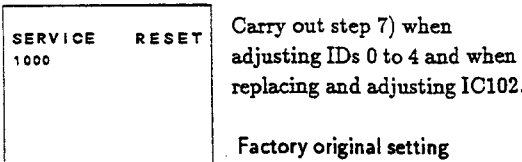


3. The CRT displays the item Being adjusted.
4. Press **1** or **4** on the Remote Commander to select the item.
5. Press **3** or **6** on the Remote Commander to change the data.
6. Press **MUTING** then **ENTER** to write into memory.

SERVICE ADJUSTMENT MODE MEMORY



7. Press **8** then **ENTER** on the Remote Commander to initialize.



Carry out step 7) when adjusting IDs 0 to 4 and when replacing and adjusting IC102.

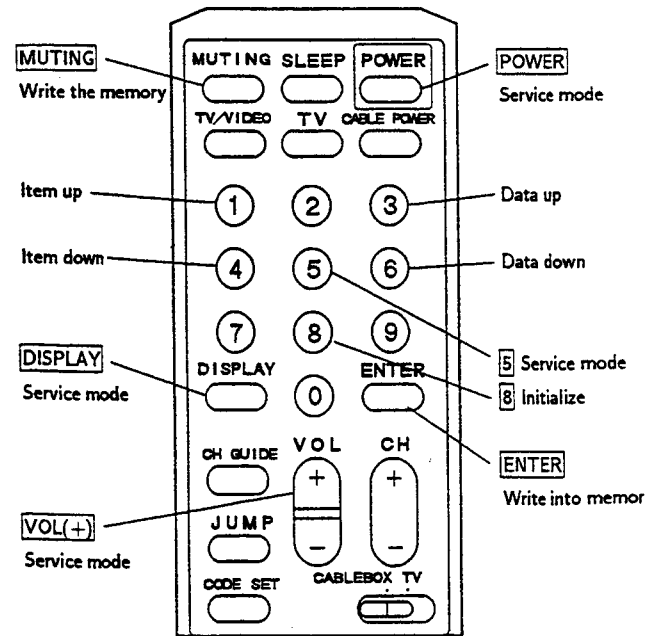
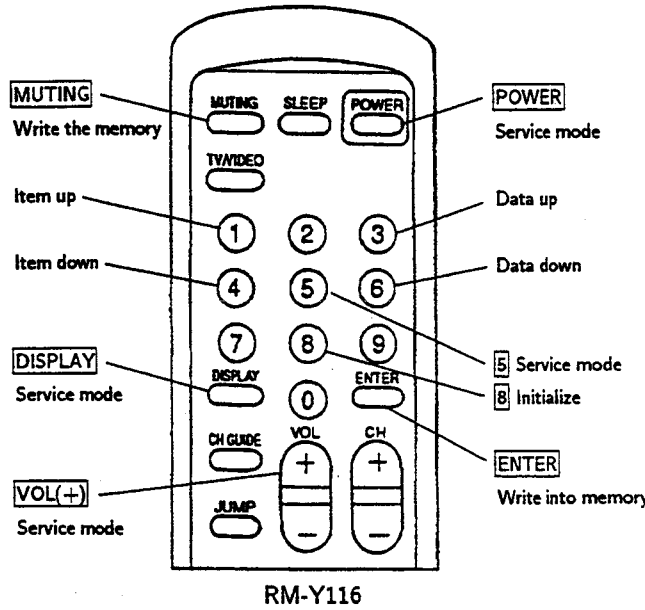
Factory original setting

8. Turn set off and on to exit.

2. MEMORY WRITE CONFIRMATION METHOD

1. After adjustment, pull out the plug from AC outlet, and next place, plug in AC outlet again.
2. Turn the power switch ON and set to Service Mode.
3. Call the adjusted items again, confirm they were adjusted.

3. ADJUST BUTTONS AND INDICATOR



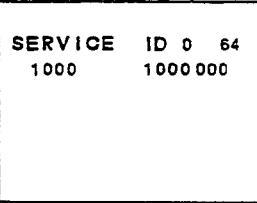
RM-Y117/RM-Y118

4. AN ITEM OF ADJUSTMENTS

No.	Disp.	Item	Data range	Ave. data (27 inch)	Ave. data (32 inch)
1	AFC	AFC Loop Gain	0~3	* 0	* 0
2	HFRE	H. Frequency	0~127	70	70
3	VFRE	V. Frequency	0~31	16	16
4	VPOS	V. Center	0~31	17	17
5	VSIZ	V. Size	0~63	28	12
6	VLIN	V. Linearity	0~15	8	7
7	VSCO	V. Correction	0~15	6	6
8	HPOS	H. Center	0~15	6	5
9	HSIZ	H. Size	0~31	31	27
10	PAMP	Pin Amp	0~31	24	31
11	CPIN	Corner Pin	0~7	3	0
12	PPHA	Pin Phase	0~15	6	4
13	VCOM	V. Compensation	0~7	* 2	* 2
14	GAMP	Green Amp	0~31	20	20
15	BAMP	Blue Amp	0~31	17	17
16	GCUT	Green Cut Off	0~15	7	7
17	BCUT	Blue Cut Off	0~15	8	8
18	CROM	Chroma Trap	0~63	* 28	* 28
19	SPIX	Sub Contrast	0~63	20	20
20	SHUE	Sub Hue	0~63	33	33
21	SCOL	Sub Color	0~63	32	32
22	SBRT	Sub Bright	0~63	35	35
23	RGBP	RGB Picture	0~63	* 10	* 10
24	SHAP	Sharpness	0~15	* 7	* 7
25	VSMO	V Pull in Range	0, 1	* 0	* 0
26	REF	Reference line	0~3	* 2	* 2
27	ROFF	Red Out	0, 1	1	1
28	GOFF	Green Out	0, 1	1	1
29	BOFF	Blue Out	0, 1	1	1
30	ABLM	ABL Mode	0, 1	* 0	* 0
31	NOTC	Notch On/Off	0, 1	* 1	* 1
32	DRGB	OSD intensity	0, 1	* 0	* 0
33	VANG	V. Angle	0~63	0	0
34	DISP	Display Position	0~63	40	40
35	SVOL	Sub Volume	0~15	* 0	* 0
36	SBAL	Sub Balance	0~15	7	7
37	BASS	Sub Bass	0~15	* 8	* 8
38	TRE	Sub Treble	0~15	* 7	* 7
39	UYBO	Upper Y. Bow	0~63	—	31
40	LYBO	Lower Y. Bow	0~63	—	25
41	HAMP	H. Amp	0~63	—	33
42	HTIL	H. Tilt	0~63	—	33
43	UCBO	Upper C. Bow	0~63	—	38
44	UTIL	Upper Tilt	0~63	—	40
45	LCBO	Lower C. Bow	0~63	—	41
46	LTIL	Lower Tilt	0~63	—	46
47	DCSH	DC. Shift	0~63	—	37
48	PHPO	PinP H Position	0~127	76	76
49	PHUE	PinP Hue	0~31	* 0	* 0
50	ID-0	Model ID	0~127	by Model	by Model
51	ID-1	Model ID	0~127	by Model	by Model
52	ID-2	Model ID	0~127	by Model	by Model
52	ID-2	Model ID	0~127	by Model	by Model
52	ID-2	Model ID	0~127	by Model	by Model
53	ID-3	Model ID	0~127	by Model	by Model
54	ID-4	Model ID	0~127	by Model	by Model

\* : Set-up value

Note : No. from 1 to 54 is to show adjustment order.



Please adjust the function values as shown below when IC 102 on M board was replaced.

KV-27TS29 (US)

No.	Disp.	Disp.	Data
50	ID-0	1 0 0 0 0 0 0	64
51	ID-1	1 1 1 1 1 1 1	127
52	ID-2	1 0 0 0 0 0 0	64
53	ID-3	0 0 0 0 0 0 0	0
54	ID-4	0 0 1 0 0 0 0	16

KV-27TS29 (CND)

No.	Disp.	Disp.	Data
50	ID-0	1 0 0 0 0 0 0	64
51	ID-1	1 1 1 1 1 1 1	127
52	ID-2	0 0 0 0 0 0 0	0
53	ID-3	0 0 0 0 0 0 0	0
54	ID-4	0 0 1 0 0 0 0	16

KV-27TS32 (US)

No.	Disp.	Disp.	Data
50	ID-0	1 1 1 1 0 0 0	120
51	ID-1	1 1 1 1 1 1 1	127
52	ID-2	1 1 0 1 0 0 0	104
53	ID-3	0 0 0 0 0 0 0	0
54	ID-4	0 0 1 0 0 0 0	16



KV-27TS36/32TS36 (US)

No.	Disp.	Disp.	Data
50	ID-0	1 1 1 1 0 0 0	120
51	ID-1	1 1 1 1 1 1 1	127
52	ID-2	1 0 0 1 0 0 0	72
53	ID-3	1 0 0 0 0 0 0	64
54	ID-4	0 0 1 0 0 0 0	16

KV-27TS36/32TS36 (CND)

No.	Disp.	Disp.	Data
50	ID-0	1 1 1 1 0 0 0	120
51	ID-1	1 1 1 1 1 1 1	127
52	ID-2	0 0 0 1 0 0 0	8
53	ID-3	1 0 0 0 0 0 0	64
54	ID-4	0 0 1 0 0 0 0	16

KV-32TS46 (US)

No.	Disp.	Disp.	Data
50	ID-0	1 1 1 1 0 0 0	120
51	ID-1	1 1 1 1 1 1 1	127
52	ID-2	1 0 0 1 0 0 0	72
53	ID-3	0 1 0 0 1 0 0	36
54	ID-4	0 0 1 0 0 0 0	16

KV-32TS46 (CND)

No.	Disp.	Disp.	Data
50	ID-0	1 1 1 1 0 0 0	120
51	ID-1	1 1 1 1 1 1 1	127
52	ID-2	0 0 0 1 0 0 0	8
53	ID-3	0 1 0 0 1 0 0	36
54	ID-4	0 0 1 0 0 0 0	16

## 5-2. M BOARD ADJUSTMENTS

### H.FREQUENCY ADJUSTMENT (HFRE)

1. Input a color-bar signal.
2. Set to Service adjustment Mode.
3. Connect a frequency counter to CN131 Pin⑬ (H. DRIVE) connector and ground.
4. Call the item of AFC, set to 3 level (free run).
5. Select HFRE with 1 and 4.
6. Adjust with 3 and 6 for the  $15734 \pm 60\text{Hz}$ .
7. Call the item of AFC again, adjust the level "0".
8. Write into the memory by pressing MUTING then ENTER.

### V.FREQUENCY ADJUSTMENT (VFRE)

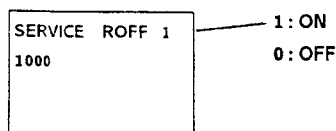
1. Select video 1 with no connecting the signal.
2. Set to Service adjustment Mode.
3. Connect the frequency counter across connector CN131 Pin⑦ (V. DRIVE) connector and ground.
4. Select VFRE with 1 and 4.
5. Adjust with 3 and 6 for the  $55 \pm 0.5\text{Hz}$ .
6. Write the memory by pressing MUTING then ENTER.



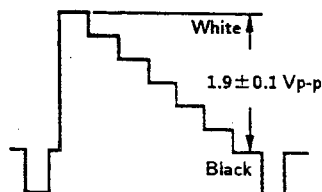
**SUB CONTRAST ADJUSTMENT (SPIX)**

1. Input a color-bar signal.
2. Set to Service adjustment Mode.
3. Set the conditions as follows.

PICTURE ..... MAX  
 COLOR ..... MIN  
 BRIGHT ..... CENTER  
 R OFF ..... ON (1)  
 G OFF ..... OFF (0)  
 B OFF ..... OFF (0)



4. Connect an oscilloscope to CN703 Pin① (R OUT) of C board and ground.
5. Select SPIX with **[1]** and **[4]**.
6. Adjust with **[3]** and **[6]** for the  $1.9 \pm 0.1$  Vp-p.

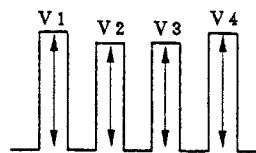


7. Write the memory by pressing **[MUTING]** then **[ENTER]**.
8. Return the following back to normal after adjustment.

PICTURE ..... MAX  
 BRIGHT ..... CENTER  
 COLOR ..... CENTER  
 R OFF ..... ON  
 G OFF ..... ON  
 B OFF ..... ON

**SUB HUE, SUB COLOR ADJUSTMENT (SHUE, SCOL)**

1. Input a color-bar signal.
2. Set to service adjustment mode.
3. Connect an oscilloscope to CN703 Pin③ (B OUT) of C board.
4. Select SHUE and SCOL with **[1]** and **[4]**.
5. Adjust with **[3]** and **[6]** for the  $V1=V4$  (SCOL) and  $V2=V3$  (SHUE).



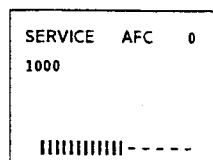
6. Increase the data of SCOL by 5 steps.
7. Write into the memory by pressing **[MUTING]** then **[ENTER]**.

**SUB BARANCE ADJUSTMENT (SBAL)**

1. Input a stereo signal.
2. Set to service adjustment mode.
3. Select SBAL with **[1]** and **[4]**.
4. Adjust with **[3]** and **[6]** for the best sound balance
5. Write into the memory by pressing **[MUTING]** then **[ENTER]**.

**DISPLAY POSITION ADJUSTMENT (DISP)**

1. Input a color-bar signal.
2. Set to service adjustment Mode.
3. Select DISP with **[1]** and **[4]**.
4. Adjust with **[3]** and **[6]** for the bar center.
5. Write the memory by pressing **[MUTING]** then **[ENTER]**.



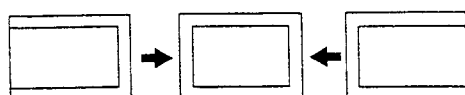


### H.CENTER ADJUSTMENT (H POS)

Note: Perform this adjustment after H.FREQUENCY ADJUSTMENT (HFRE).

1. Input a cross-hatch signal.
2. Set the Service adjustment mode.
3. Select HPOS with **[1]** and **[4]**.
4. Adjust with **[3]** and **[6]** to the best horizontal center.
5. Write into the memory by pressing **[MUTING]** then **[ENTER]**.

H. CENTER (HPOS)



### H.SIZE ADJUSTMENT (HSIZ)

1. Input a cross-hatch signal.
2. Set to service adjustment Mode.
3. Select HSIZ with **[1]** and **[4]**.
4. Adjust with **[3]** and **[6]** for best horizontal size.
5. Write into the memory by pressing **[MUTING]** then **[ENTER]**.

H. SIZE (HSIZ)



### V.CENTER ADJUSTMENT (VPOS)

1. Input a cross-hatch signal.
2. Set to service adjustment Mode.
3. Select VPOS with **[1]** and **[4]**.
4. Adjust with **[3]** and **[6]** for the best vertical center.
5. Write into the memory by pressing **[MUTING]** then **[ENTER]**.

V. CENTER (VPOS)



### V.SIZE ADJUSTMENT (VSIZ)

1. Input a cross-hatch signal.
2. Set to service adjustment Mode.
3. Select VSIZ with **[1]** and **[4]**.
4. Adjust with **[3]** and **[6]** for the best vertical size.
5. Write into the memory by pressing **[MUTING]** then **[ENTER]**.

V. SIZE (VSIZ)



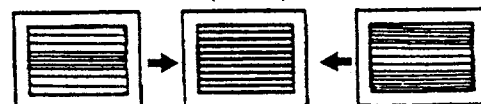
### V LINEARITY(VLIN), VS CORRECTION(VSCO), PIN AMP(PAMP), CORNER PIN(CPIN), AND PIN PHASE(PPHA) ADJUSTMENTS

1. Input a cross-hatch signal.
2. Set to Service adjustment Mode.
3. Select VLIN, VSCO, PAMP, CPIN, and PPHA with **[1]** and **[4]**.
4. Adjust with **[3]** and **[6]** for the best picture.
5. Write the memory by Pressing **[MUTING]** then **[ENTER]**.

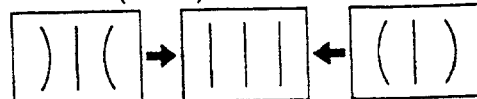
V LINEARITY (VLIN)



VS CORRECTION (VSCO)



PIN AMP (PAMP)



CORNER PIN (CPIN)



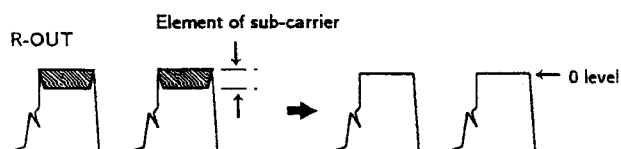
PIN PHASE (PPHA)





### CROMA TRAP ADJUSTMENT (CROM)

1. Input a red signal
2. Set to Service adjustment Mode.
3. Connect an oscilloscope CN703 Pin① (R OUT) of C board ground.
4. Select CROM with **[1]** and **[4]**.
5. Adjust with **[3]** and **[6]** for the 0 level.

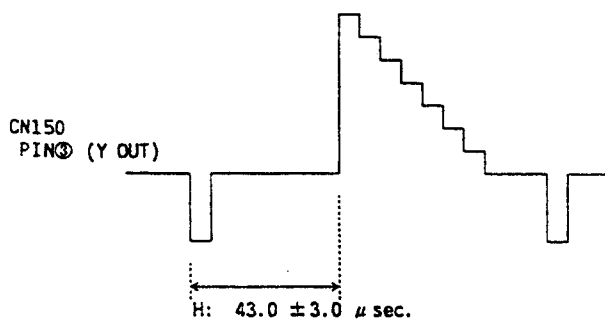


6. Write the memory by pressing **MUTING** then **ENTER**.

### 5-3. P BOARD ADJUSTMENTS

#### P IN P H. POSITION (PHPO)

1. Input a color-bar signal
2. Set to Service adjustment Mode.
3. Connect an oscilloscope CN150 Pin③ (Y OUT).
4. Select PHPO with **[1]** and **[4]**.
5. Adjust with **[3]** and **[6]** for the  $43.0 \pm 3.0 \mu\text{sec}$  (H).



6. Write the memory by pressing **MUTING** then **ENTER**.

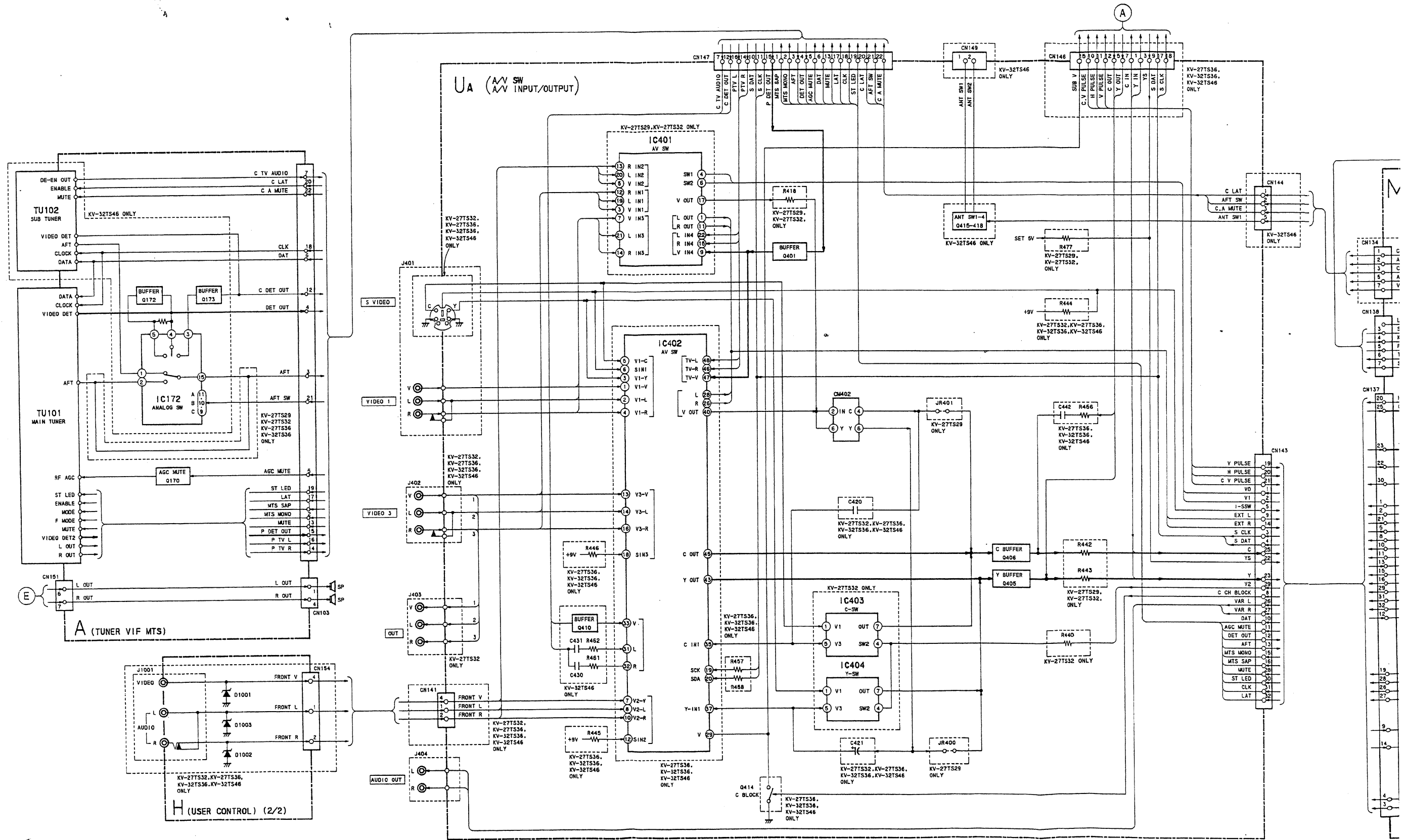


6-1. BLOCK DIAGRAMS (1)

SECTION 6  
DIAGRAMS

KV-27TS29/27TS32/27TS36  
RM-Y116 RM-Y117 RM-Y118  
KV-32TS36/32TS46  
RM-Y118 RM-Y118  
SA-W200

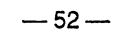
KV-27TS29/27TS32/27TS36  
RM-Y116 RM-Y117 RM-Y118  
KV-32TS36/32TS46  
RM-Y118 RM-Y118  
SA-W200





**KV-27TS29/27TS32/27TS36**  
RM-Y118 RM-Y117 RM-Y118

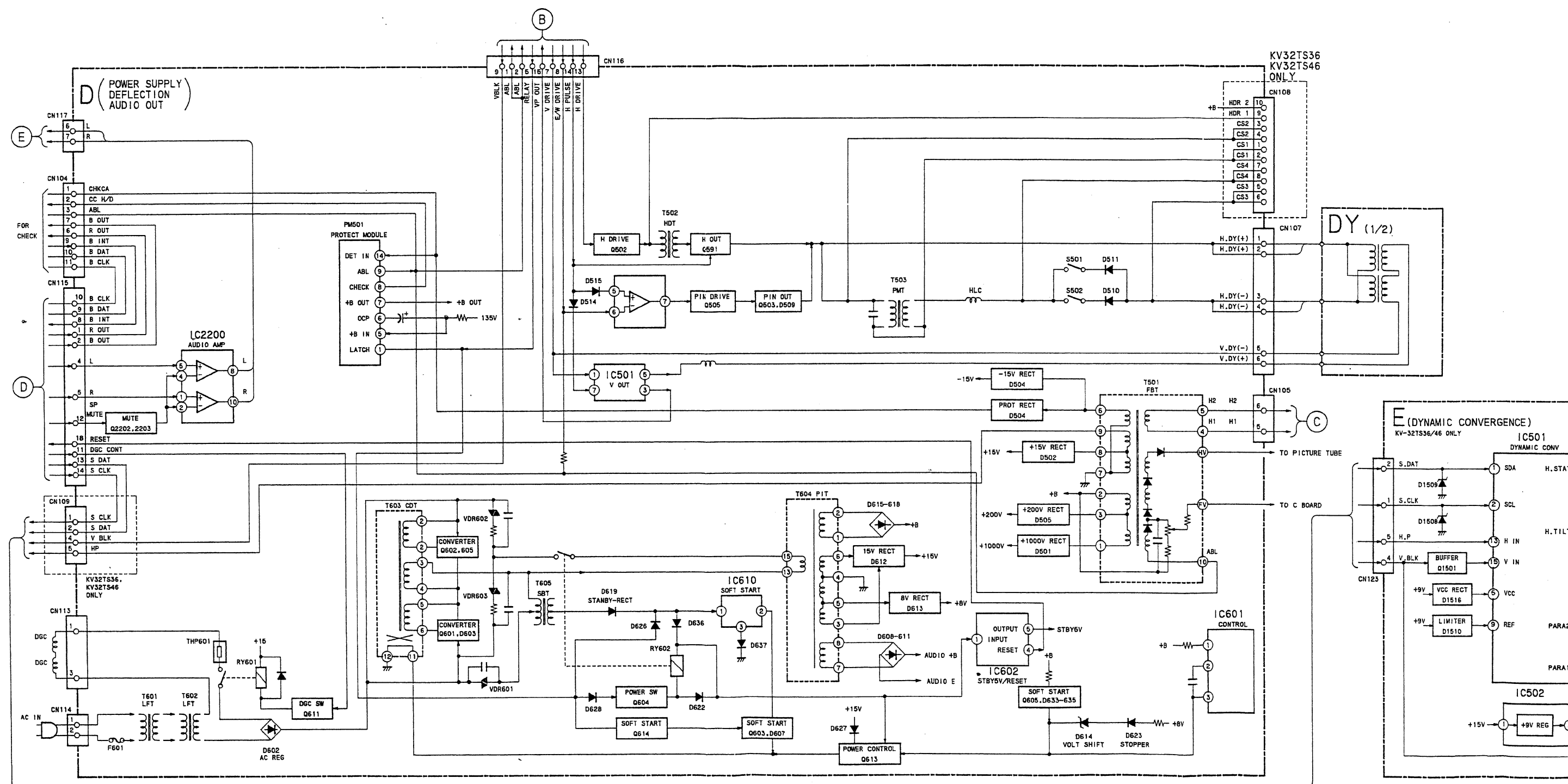
**KV-32TS36/32TS46**  
RM-Y118 RM-Y118  
SA-W200





KV-27TS29/27TS32/27TS36	KV-27TS29/27TS32/27TS36
RM-Y116 RM-Y117 RM-Y118	RM-Y116 RM-Y117 RM-Y118
KV-32TS36/32TS46	KV-32TS36/32TS46
RM-Y116 RM-Y118 SA-W200	RM-Y116 RM-Y118 SA-W200

# BLOCK DIAGRAMS (2)

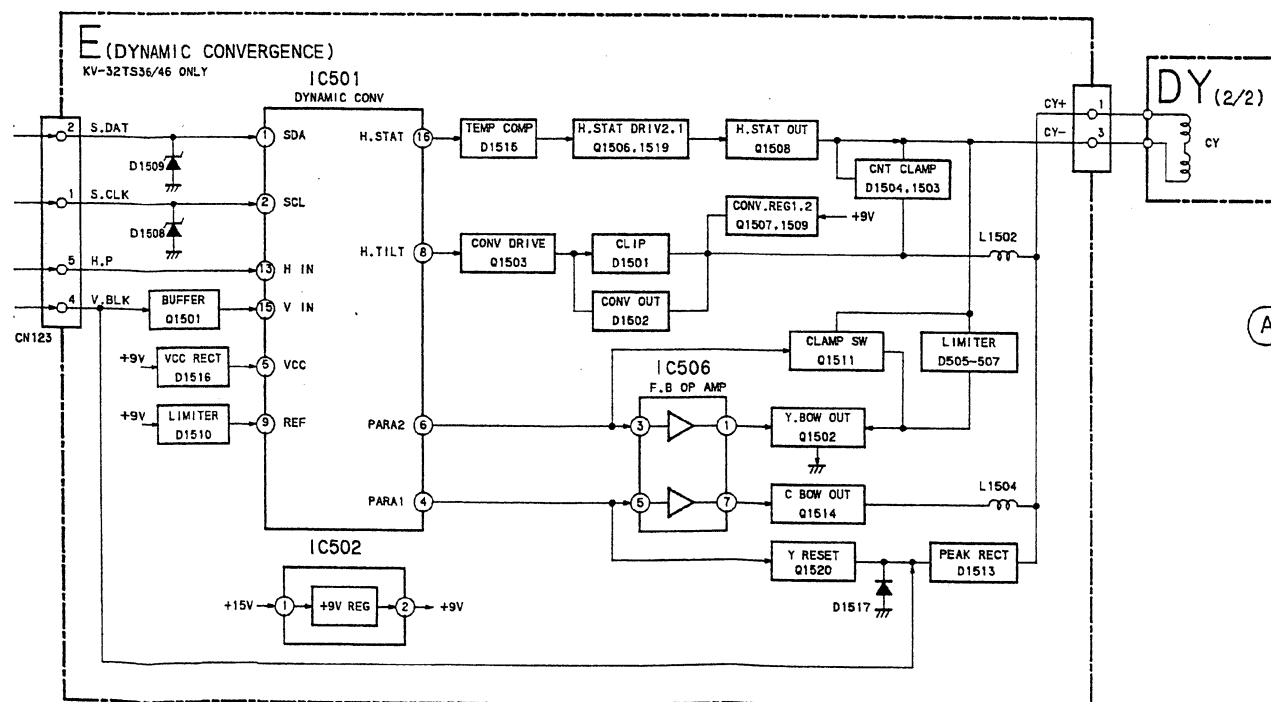
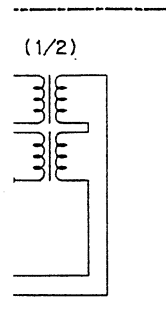




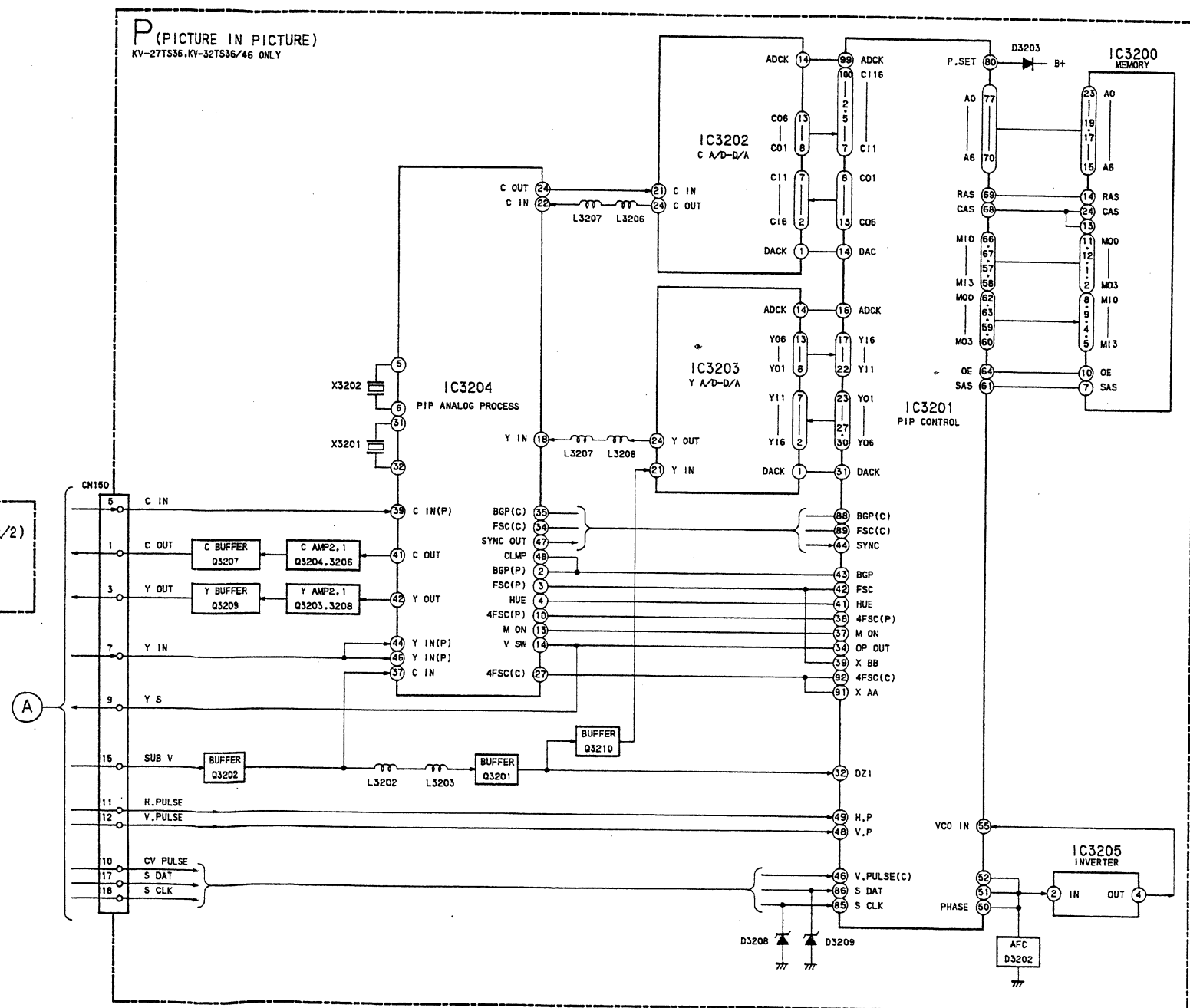
KV-27TS29/27TS32/27TS36  
RM-Y116 RM-Y117 RM-Y118  
KV-32TS36/32TS46  
RM-Y116 RM-Y118  
SA-W200

KV-27TS29/27TS32/27TS36  
RM-Y116 RM-Y117 RM-Y118  
KV-32TS36/32TS46  
RM-Y116 RM-Y118  
SA-W200

(1/2)



**P (PICTURE IN PICTURE)**  
KV-27TS36, KV-32TS36/46 ONLY





**FOR CHECK**

CHKCA	1	2	3	4	5	6	7	8	9	10	11
CC H/B	1	2	3	4	5	6	7	8	9	10	11
ABL	1	2	3	4	5	6	7	8	9	10	11
N.C.	1	2	3	4	5	6	7	8	9	10	11
R OUT	1	2	3	4	5	6	7	8	9	10	11
B OUT	1	2	3	4	5	6	7	8	9	10	11
B INT	1	2	3	4	5	6	7	8	9	10	11
B DAT	1	2	3	4	5	6	7	8	9	10	11
B CLK	1	2	3	4	5	6	7	8	9	10	11

CH104  
11P  
:8T08-S

**Speakers:**  
SPEAKER  
L R  
L OUT E R OUT  
CN103  
4P  
WHT-L  
:S-MICRO

**Microphones:**  
CN154  
4P  
WHT-L  
:S-MICRO  
CN155  
4P  
REG-L  
:S-MICRO  
CN141  
4P  
WHT-L  
:S-MICRO

**Control Panel:**  
STBY SV 1  
SIRC 2  
KEY 0 3  
POWER 4  
TIMER LED 5  
STEREO LED 6  
9V 7  
8

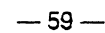
**Connectors:**  
CN117 11P :8T08-P  
CN151 11P :8T08-S  
CN152 32P :8T08-P  
CN149 4P WHT-L :S-MICRO  
CN147 32P :8T08-S  
CN146 18P :8T08-S  
CN144 4P WHT-L :S-MICRO  
CN150 18P :8T08-P

**Wiring Diagram:**  
The diagram shows the following connections:  
- 135V, 12V, SET SV, STBY 9V, 9V, L, R, AUDIO E, and E are connected to CN117 and CN151.  
- 135V, 12V, SET SV, STBY 9V, 9V, L, R, AUDIO E, and E are connected to CN152.  
- MTS SAP, MTS MONO, AFT, GET OUT, AGC MUTE, BAT, C TV L, E, S BAT, S CLK, C GET OUT, MUTE, P TV R, P GET OUT, P TV L, LAT, CLK, ST LED, C LAT, AFT SW, C A MUTE, E, STBY 9V, C ANT SW, 135V, 135V, 9V, 12V, E, and E are connected to CN149 and CN147.  
- MTS SAP, MTS MONO, AFT, GET OUT, AGC MUTE, BAT, C TV L, E, S BAT, S CLK, C GET OUT, MUTE, P TV R, P GET OUT, P TV L, LAT, CLK, ST LED, C LAT, AFT SW, C A MUTE, E, STBY 9V, C ANT SW, 135V, 135V, 9V, 12V, E, and E are connected to CN146 and CN144.  
- C OUT, E, Y OUT, E, C IN, E, Y IN, E, Y5, C V PULSE, H PULSE, V PULSE, SV, SUB V, 9V, S DAT, S CLK, and S CLK are connected to CN150.  
- C LAT, AFT SW, C A MUTE, STBY SV, ANT SW 1, and E are connected to CN144.

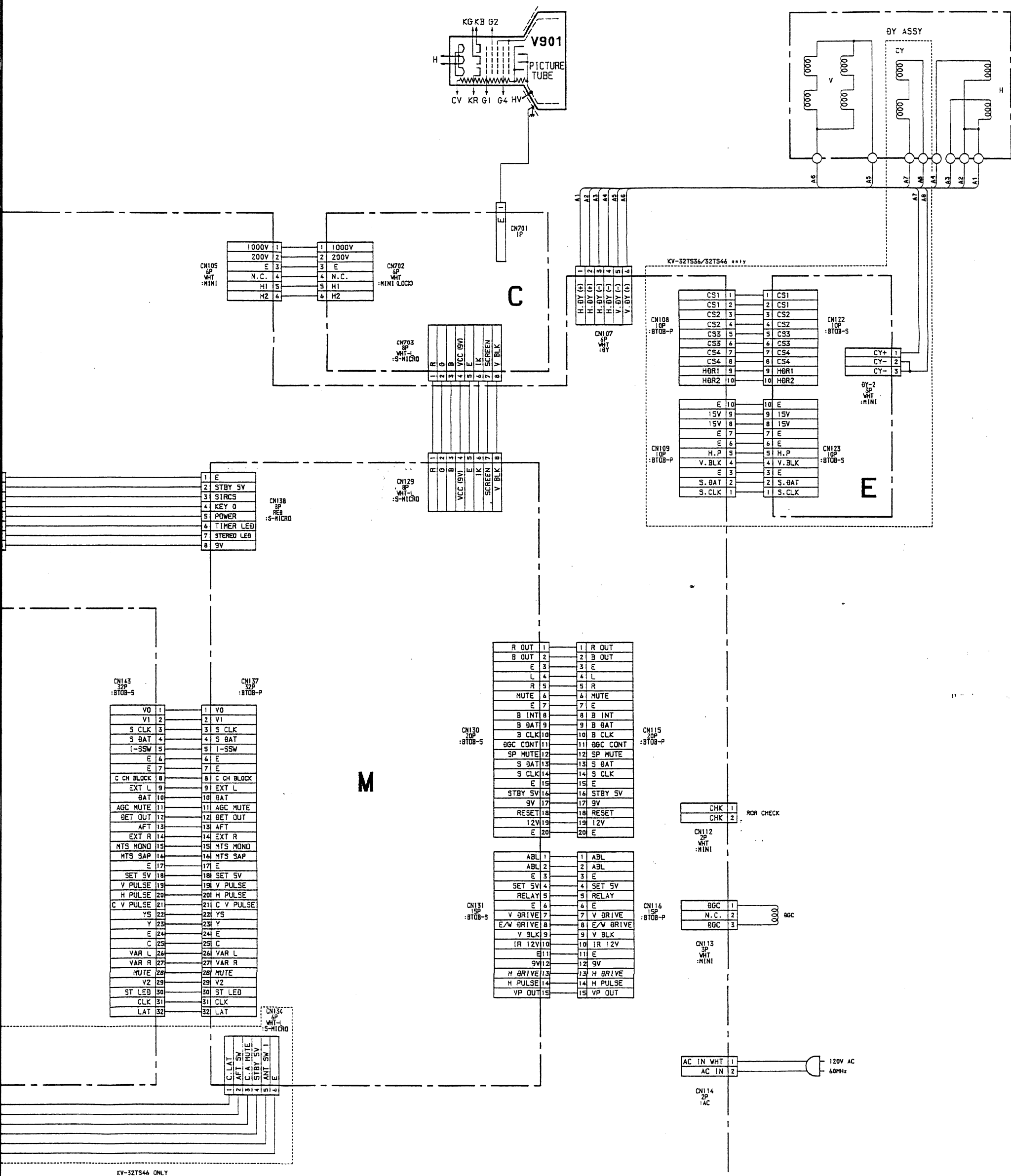






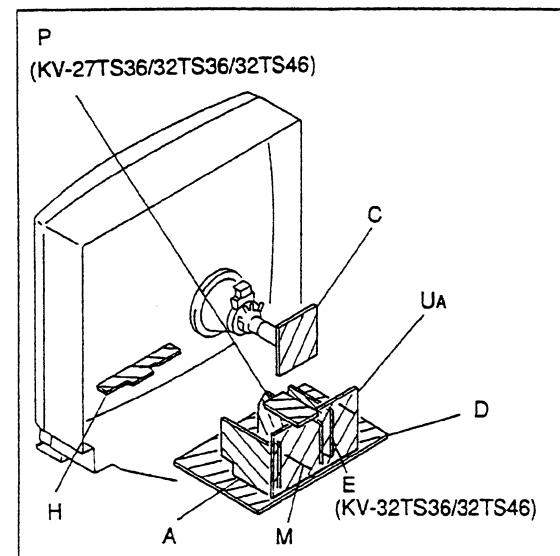








### 6-3. CIRCUIT BOARDS LOCATION



### 6-4. PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

#### Note:

- All capacitors are in  $\mu\text{F}$  unless otherwise noted.
- $\text{pF}$ :  $\mu\text{F}$  50WV or less are not indicated except for electrolytic and tantalums.
- All electrolytics are in 50V unless otherwise specified.
- Indication of resistance, which does not have one for rating electrical power, is as follows.

Pitch: 5 mm  
Rating electrical power 1/4W

- Chips resistors are 1/10W.
- All resistors are in ohms.
- $\text{k}\Omega=1000\Omega$ ,  $\text{M}\Omega=1000\text{k}\Omega$
- : nonflammable resistor.
- : fusible resistor.
- : internal component.
- : panel designation, and adjustment for repair.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- : earth-ground. (cool)
- : earth-chassis. (hot)
- The components identified by in this manual have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation.
- Should replacement be required, replace only with the value originally used.
- When replacing components identified by , make the necessary adjustments indicated. If results do not meet the specified value, change the component identified by and repeat the adjustment until the specified value is achieved. (Refer to R511 and R524 on page 41, 42)
- When replacing the part in below table be sure to perform the related adjustment.

Part replaced (  )	Adjustment (  )
PM501, R511, R632, R645, R650, R338	D BOARD M BOARD HOLD-DOWN (R511)
IC601, PM501, D504, C598, R509, R524, R632, R635, R645, T501, R338	D BOARD M BOARD HOLD-DOWN (R524)

- All voltages are in V.
- Voltage are dc with respect to ground unless otherwise noted.
- Readings are taken with a 10 M $\Omega$  digital multimeter.
- Readings are taken with a color-bar signal input.
- Voltage variations may be noted due to normal production tolerance.
- Circled numbers are waveform references.

- : B+ line.
- : B- line.
- : signal path.

#### Reference information

RESISTOR	: RN	METAL FILM
	: RC	SOLID
	: FPRD	NONFLAMMABLE CARBON
	: FUSE	NONFLAMMABLE FUSIBLE
	: RW	NONFLAMMABLE WIREWOUND
	: RS	NONFLAMMABLE METAL OXIDE
	: RB	NONFLAMMABLE CEMENT
	: *	ADJUSTMENT RESISTOR
COIL	: LF-8L	MICRO INDUCTOR
CAPACITOR	: TA	TANTALUM
	: PS	STYROL
	: PP	POLYPROPYLENE
	: PT	MYLAR
	: MPS	METALIZED POLYESTER
	: MPP	METALIZED POLYPROPYLENE
	: ALB	BIPOLAR
	: ALT	HIGH TEMPERATURE
	: ALR	HIGH RIPPLE

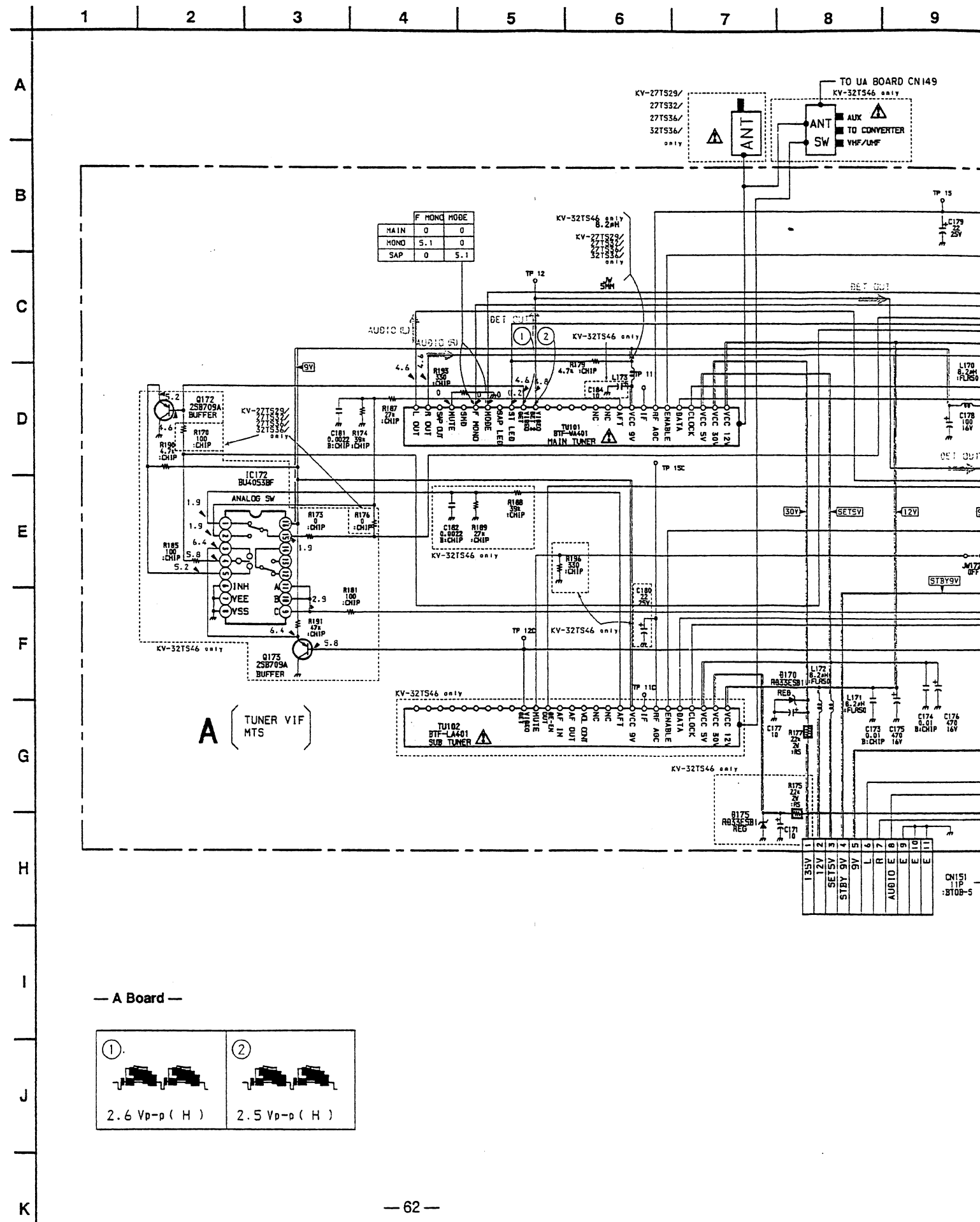
Note: The symbol display is on the component side.

The components identified by shading and mark are critical for safety. Replace only with part number specified.

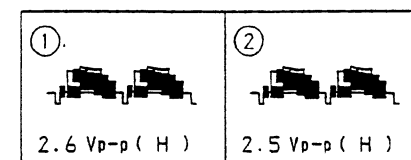
The symbol indicate fast operating fuse. Replace only with fuse of same rating as marked.

Note: Les composants identifiés par un tramé et une marque sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

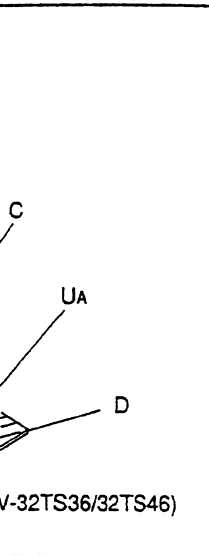
Le symbole indique une fusible à action rapide. Doit être remplacée par une fusible de même valeur, comme marqué.





— A Board —










Part replaced (  )	Adjustment (  )
PM501, R511, R632, R645, R650 R338 <div style="display: inline-block; vertical-align: middle; margin-left: 10px;">             } D BOARD              M BOARD           </div>	HOLD-DOWN (R511)
IC601, PM501, D504, C598 R509, R524, R632, R635, R645, T501 R338 <div style="display: inline-block; vertical-align: middle; margin-left: 10px;">             } D BOARD              M BOARD           </div>	HOLD-DOWN (R524)

- All voltages are in V.
- Voltage are dc with respect to ground unless otherwise noted.
- Readings are taken with a 10 M $\Omega$  digital multimeter.
- Readings are taken with a color-bar signal input.
- Voltage variations may be noted due to normal production tolerance.
- Circled numbers are waveform references.

-  : B+ line.
-  : B- line.
-  : signal path.

### Reference information


RESISTOR	: RN	METAL FILM
	: RC	SOLID
	: FPRD	NONFLAMMABLE CARBON
	: FUSE	NONFLAMMABLE FUSIBLE
	: RW	NONFLAMMABLE WIREWOUND
	: RS	NONFLAMMABLE METAL OXIDE
	: RB	NONFLAMMABLE CEMENT
	: ⌘	ADJUSTMENT RESISTOR
COIL	: LF-8L	MICRO INDUCTOR
CAPACITOR	: TA	TANTALUM
	: PS	STYROL
	: PP	POLYPROPYLENE
	: PT	MYLAR
	: MPS	METALIZED POLYESTER
	: MPP	METALIZED POLYPROPYLENE
	: ALB	BIPOLAR
	: ALT	HIGH TEMPERATURE
	: ALR	HIGH RIPPLE


Note: The symbol  display is on the component side.

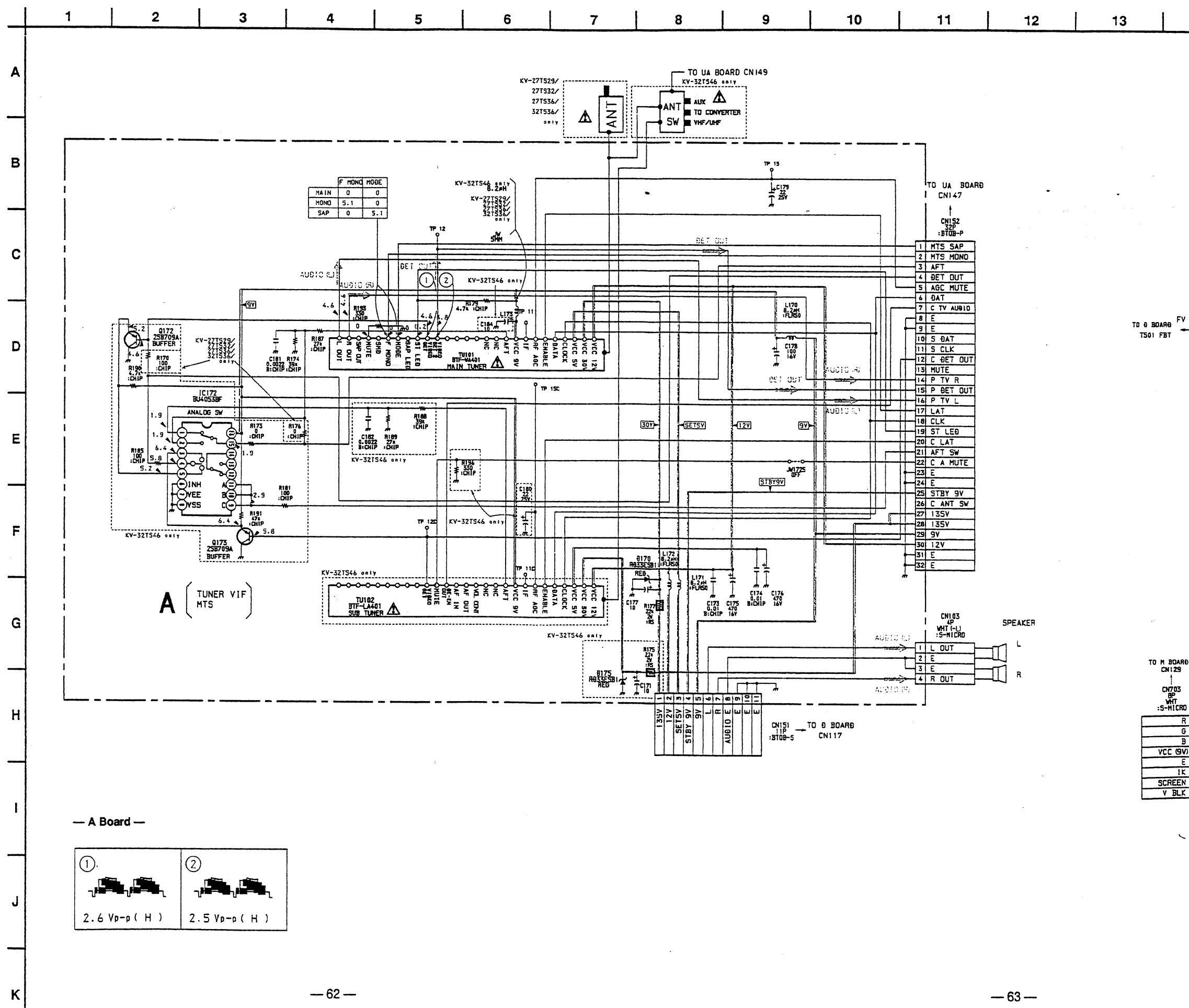
The components identified by shading and mark **Δ** are critical for safety. Replace only with part number specified.

The symbol  indicate fast operating fuse. Replace only with fuse of same rating as marked.

Note: Les composants identifiés par un trame et une marque  $\Delta$  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Le symbole  indique une fusible à action rapide. Doit être remplacée par une fusible de même valeur, comme marqué.

Le symbole  indique une fusible a action rapide. Doit etre remplacee par une fusible de meme valeur, comme marque.

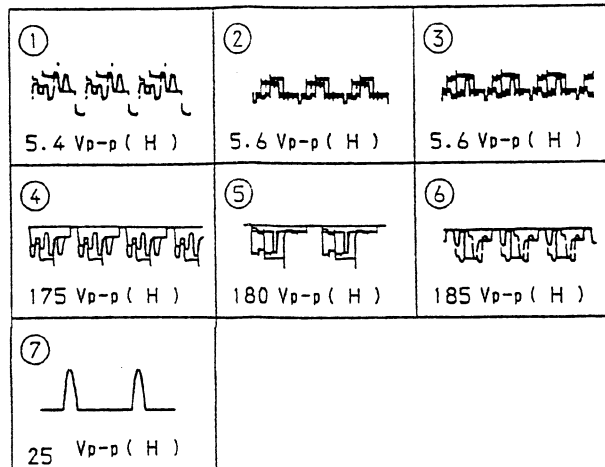




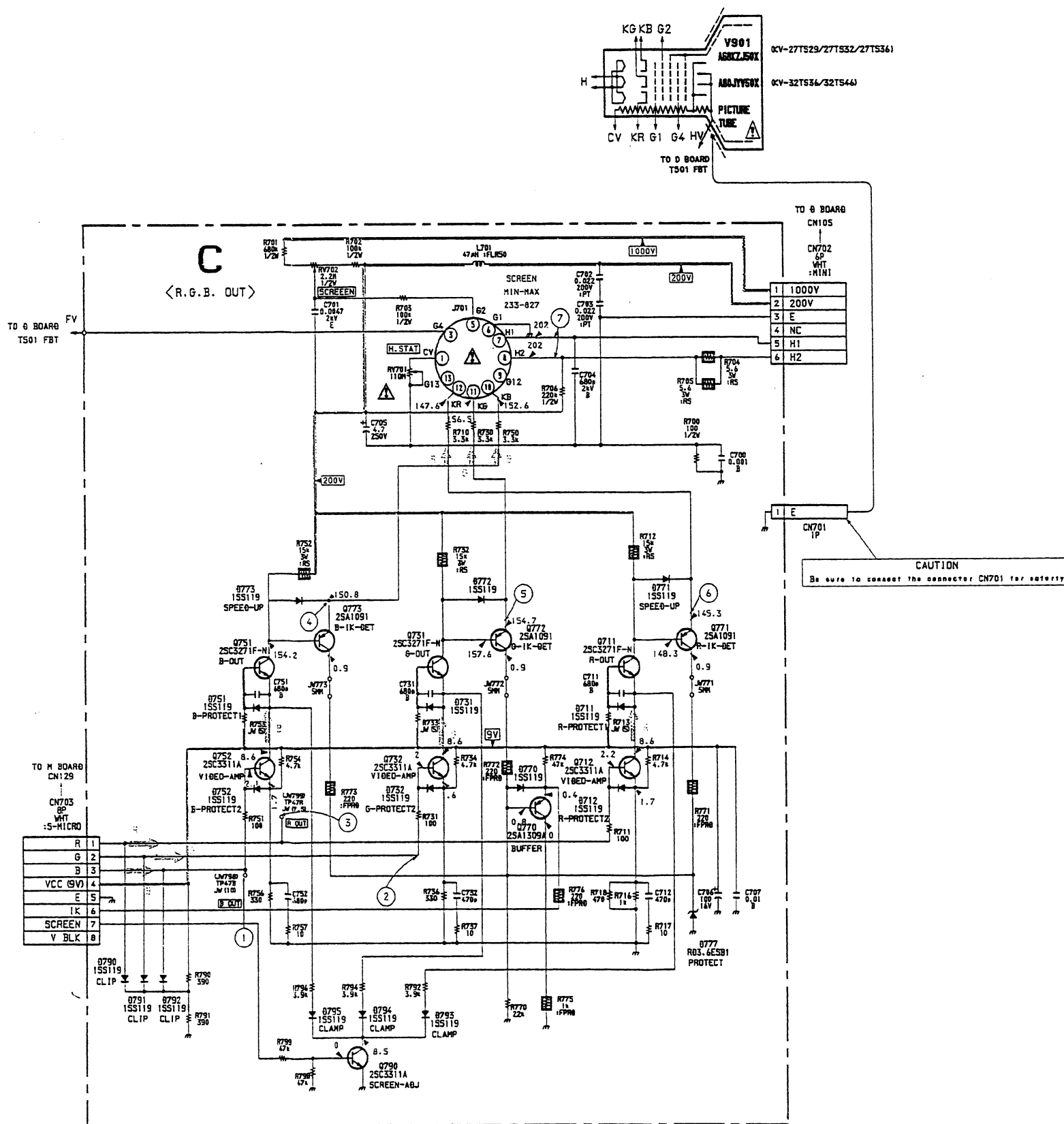




— C Board —



13 14 15 16 17 18 19 20 21 22 23

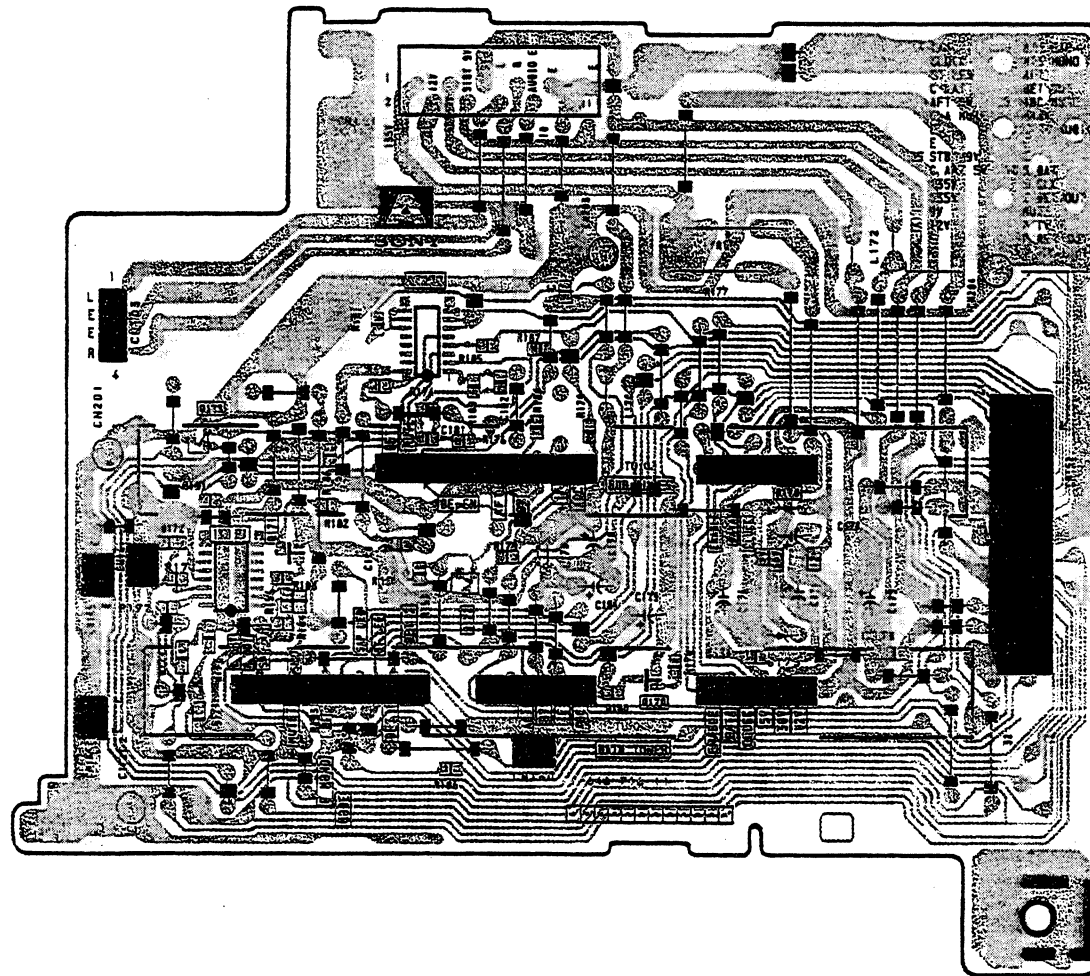





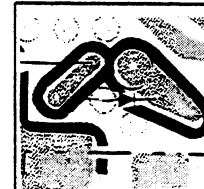
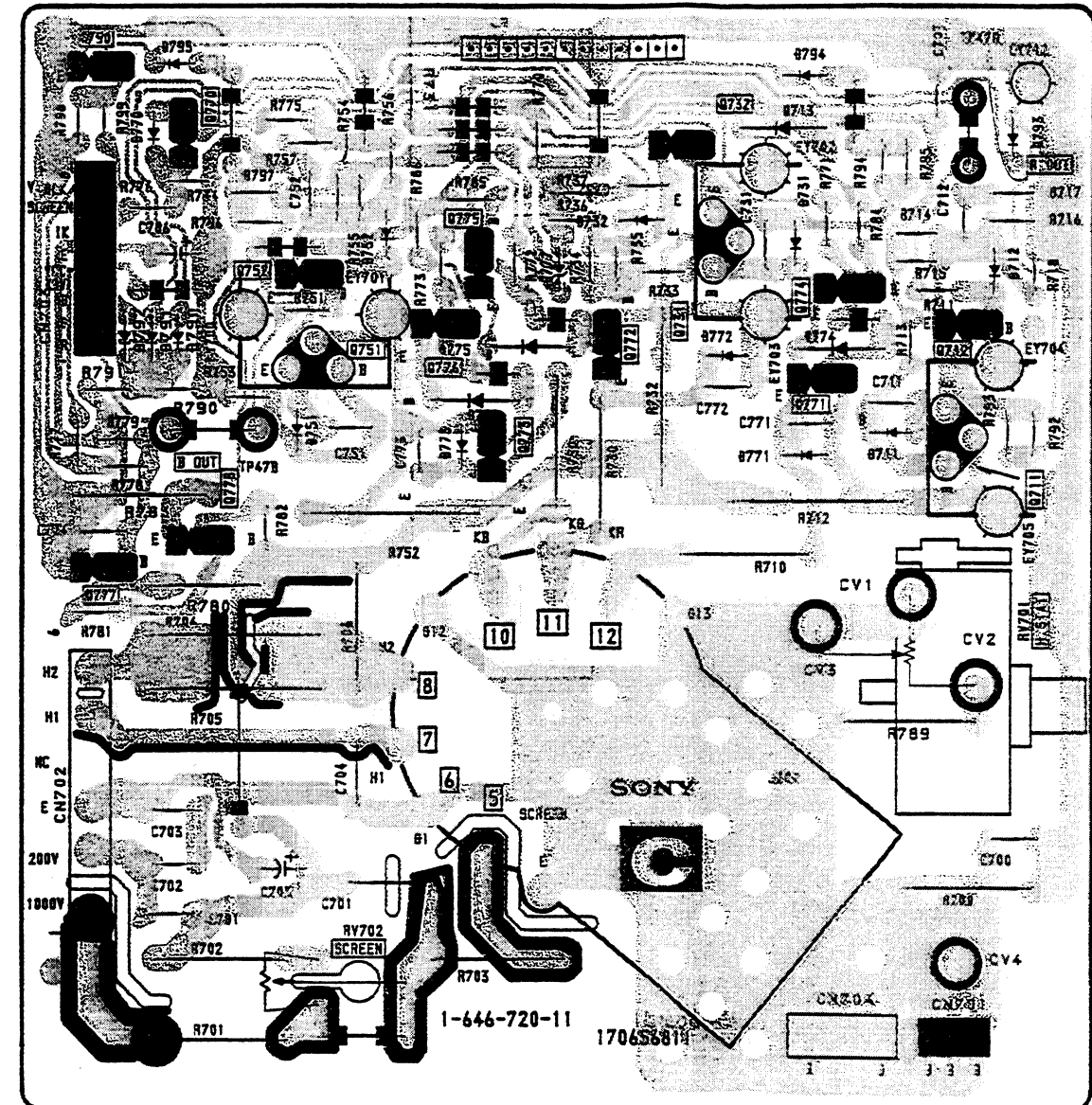
**KV-27TS29/27TS32/27TS36**  
RM-Y118 RM-Y117 RM-Y118

**KV-32TS36/32TS46**  
RM-Y118 RM-Y118  
SA-W200

— A Board —



— C Board —



**NOTE:**  
The circuit indicated as left contains high voltage of over 600 Vp-p. Care must be paid to prevent an electric shock in inspection or repairing.



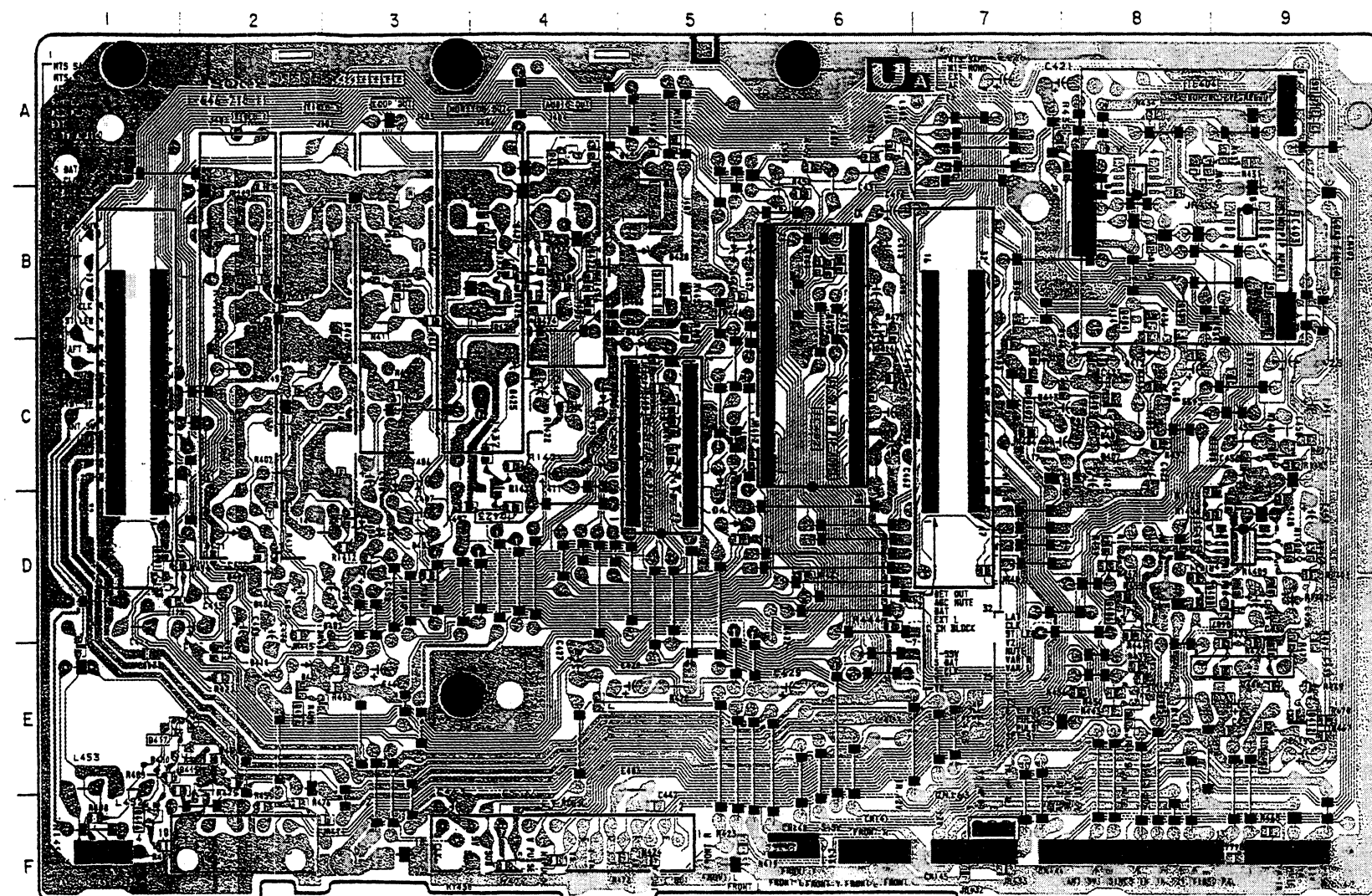
KV-27TS29/27TS32/27TS36	KV-27TS29/27TS32/27TS36
RM-Y116 RM-Y117 RM-Y118	RM-Y116 RM-Y117 RM-Y118
KV-32TS36/32TS46	KV-32TS36/32TS46
RM-Y118 RM-Y118 SA-W200	RM-Y118 RM-Y118 SA-W200

**UA** [AV SW, AV INPUT, AV OUTPUT]

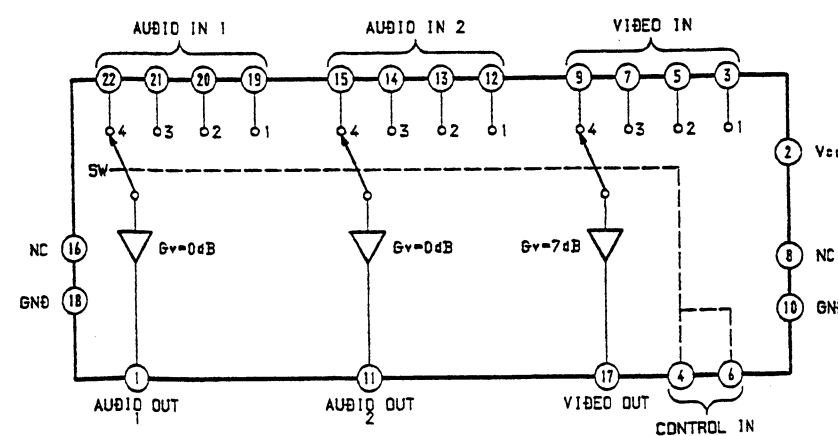
— UA Board —

IC	
IC401	C-5
IC402	C-6
IC403	B-9
IC404	A-8
TRANSISTOR	
Q401	D-1
Q405	E-8
Q406	D-8
Q410	A-4
Q414	B-6
Q415	E-2
Q416	F-1
Q417	E-1
Q418	E-1
DIODE	
D401	D-2
D402	D-3
D405	C-4
D408	D-2
D436	B-5
D437	B-5

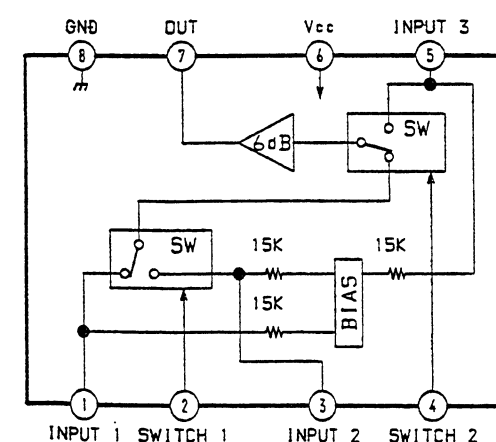
— UA Board —



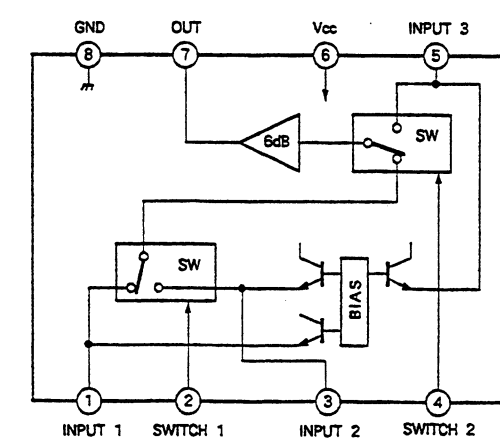
UA Board IC401 M5470AP



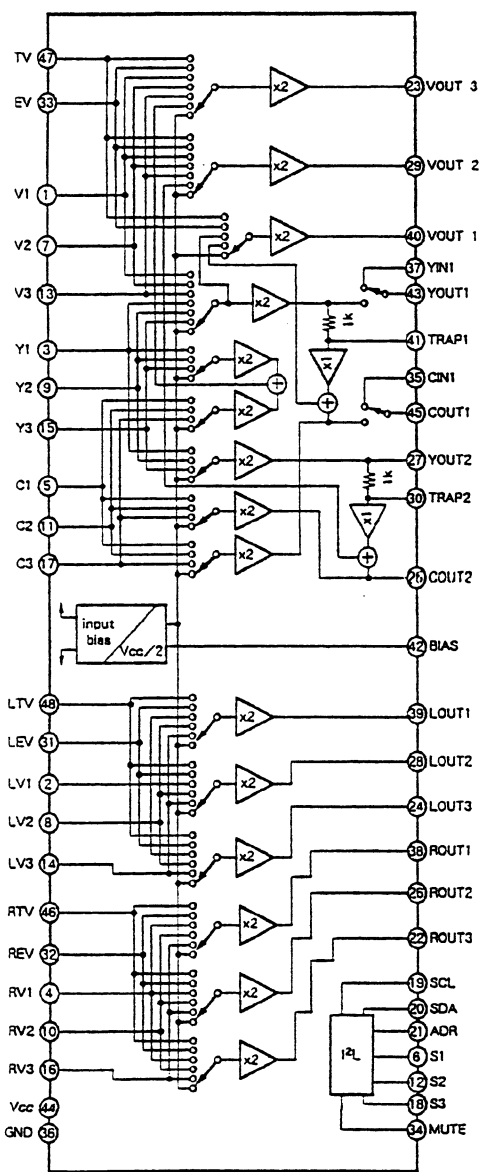
UA Board IC403 MM114XFF




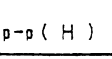
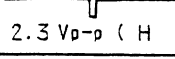


UA Board IC404 MM118XFF







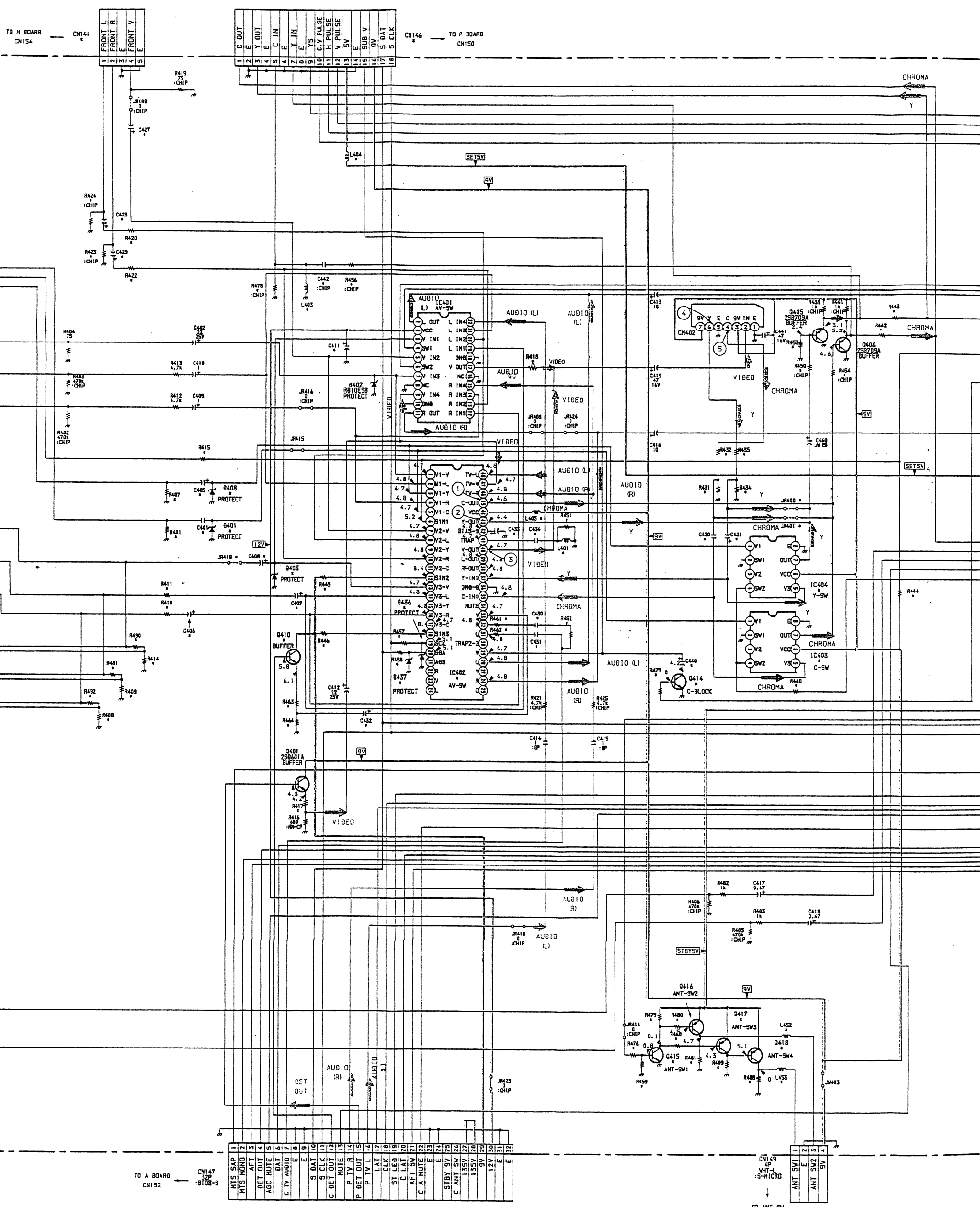
<p>①</p>  <p>2.2 <math>V_{p-p} (H)</math></p>	<p>②</p>  <p>2.3 <math>V_{p-p} (H)</math></p>	<p>③</p>  <p>2.6 <math>V_{p-p} (H)</math></p>
<p>④</p>  <p>2.4 <math>V_{p-p} (H)</math></p>	<p>⑤</p>  <p>2.6 <math>V_{p-p} (H)</math></p>	



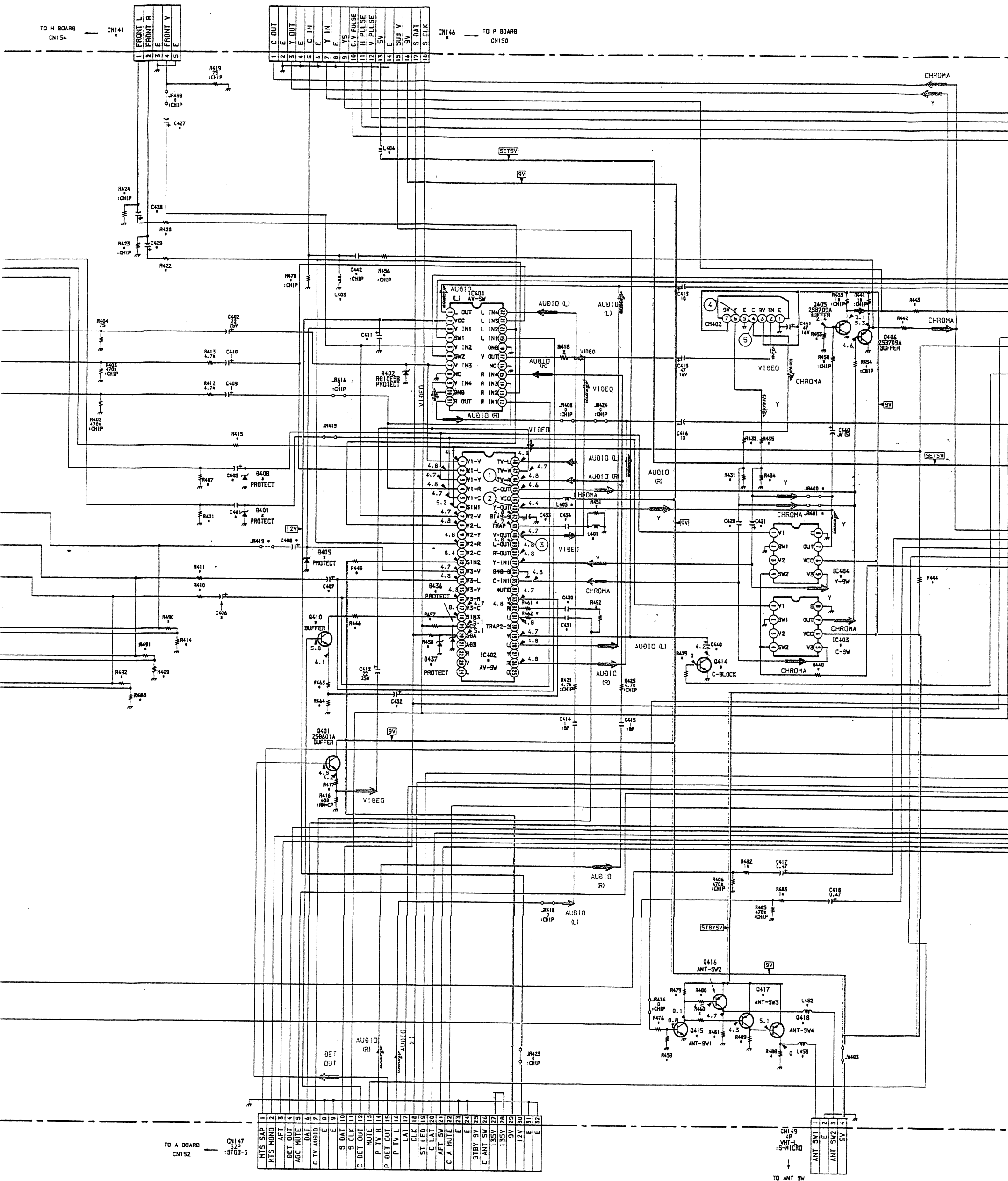


UA

SW  
INPUT  
OUTPUT

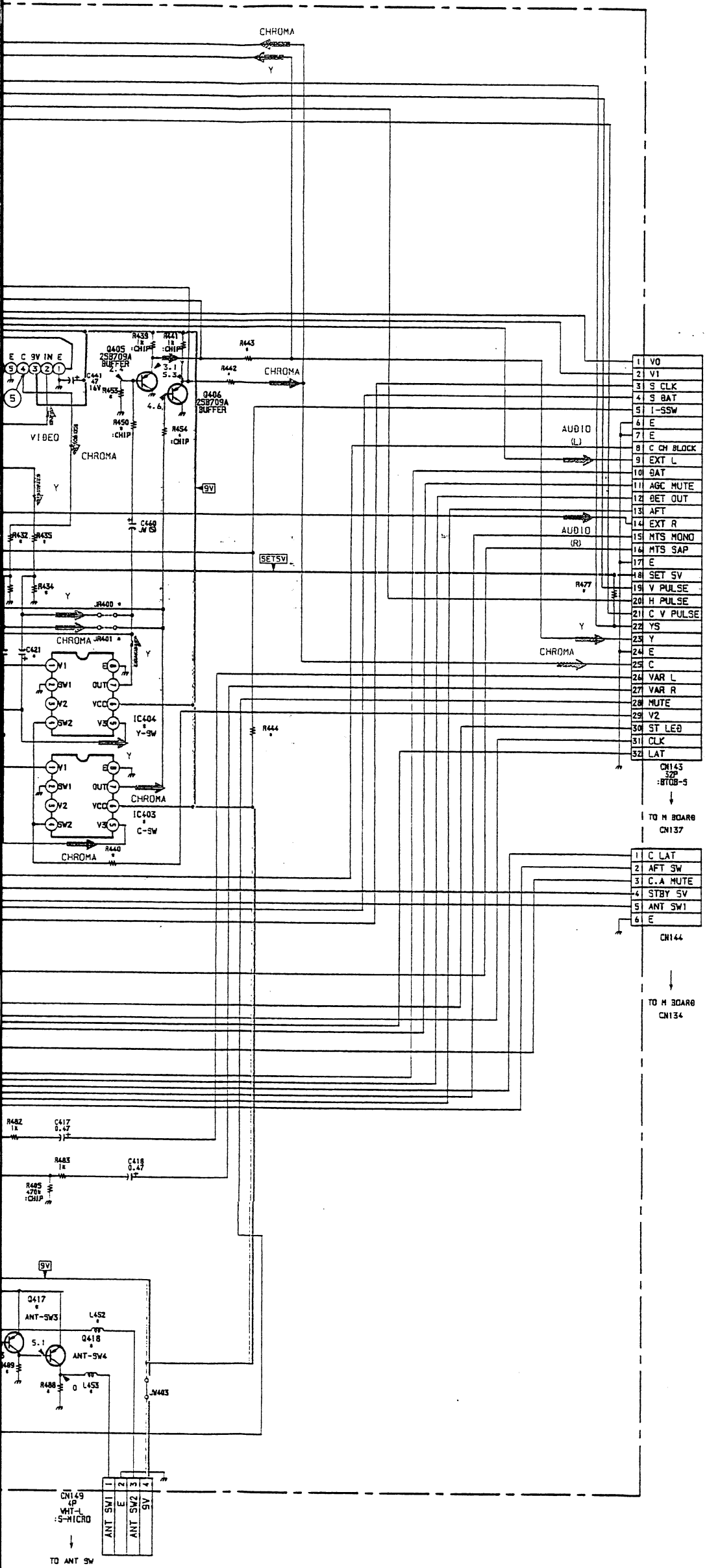






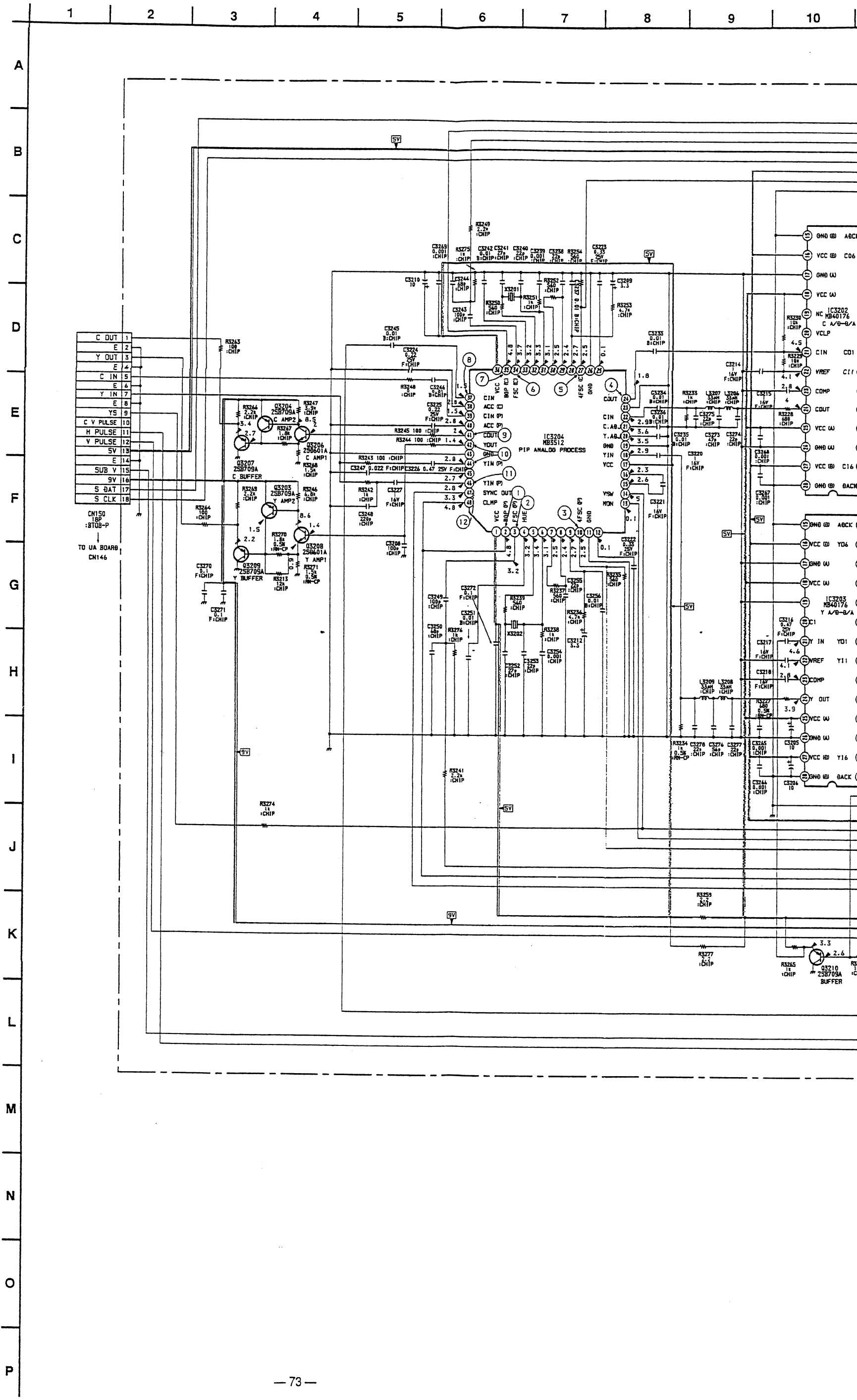


— UA Board —

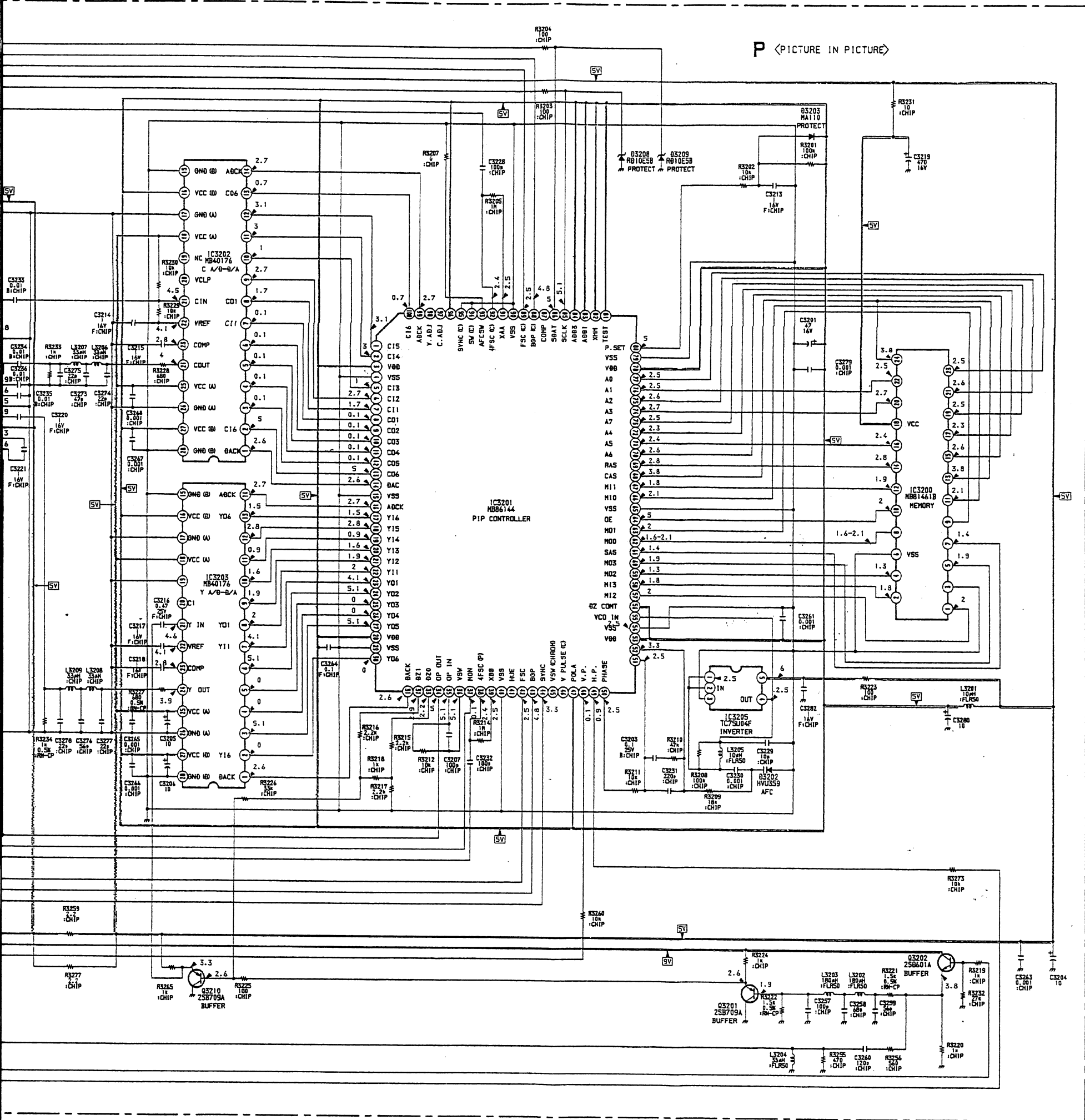


	KV-32TS46	KV-27TS36 KV-32TS36	KV-27TS32	KV-27TS29
C401	0.01 F: CHIP	0.01 F: CHIP	0.01 F: CHIP	-
C405	22 25V	22 25V	22 25V	-
C406	1	1	1	-
C407	1	1	1	-
C408	22 25V	22 25V	22 25V	-
C411	-	-	100 25V	100 25V
C420	0.01 F: CHIP	0.01 F: CHIP	0.01 F: CHIP	-
C421	22 25V	22 25V	0.47	-
C427	JW (S)	JW (S)	JW (S)	-
C428	JW (S)	JW (S)	JW (S)	-
C429	JW (S)	JW (S)	JW (S)	-
C430	1	-	-	-
C431	1	-	-	-
C432	22 25V	-	-	-
C433	33 25V	33 25V	-	-
C434	100P : CHIP	100P : CHIP	-	-
C440	10	10	-	-
C442	100P : CHIP	100P : CHIP	-	-
CN141	5P WHT-L : S-MICRO	5P WHT-L : S-MICRO	5P WHT-L : S-MICRO	-
CN144	6P WHT-L : S-MICRO	-	-	-
CN146	18P : BT08-S	18P : BT08-S	-	-
CN149	4P WHT-L : S-MICRO	-	-	-
D401	RD10ESB	RD10ESB	RD10ESB	-
D405	RD10ESB	RD10ESB	RD10ESB	-
D408	RD10ESB	RD10ESB	RD10ESB	-
D436	RD10ESB	RD10ESB	-	-
D437	RD10ESB	RD10ESB	-	-
IC401	-	-	M52470AP	M52470AP
IC402	CXA1545AS	CXA1545AS	-	-
IC403	-	-	M1114XFF	-
IC404	-	-	M1118XFF	-
J401	S TERMINAL BLOCK	S TERMINAL BLOCK	S TERMINAL BLOCK	PIN JACK BLOCK
J402	PIN JACK BLOCK	PIN JACK BLOCK	PIN JACK BLOCK	-
J403	-	-	PIN JACK BLOCK	-
JR400	-	-	0 : CHIP	0 : CHIP
JR401	-	-	0 : CHIP	0 : CHIP
JR415	0 : CHIP	0 : CHIP	0 : CHIP	-
JR419	0 : CHIP	0 : CHIP	0 : CHIP	-
JW403	10M	-	-	-
L401	18uH : FLR50	18uH : FLR50	-	-
L403	33uH : FLR50	33uH : FLR50	-	-
L404	JW (S)	JW (S)	-	-
L405	JW (S)	JW (S)	-	-
L452	JW (S)	-	-	-
L453	JW (S)	-	-	-
Q410	2SD601A	-	-	-
Q414	2SD601A	2SD601A	-	-
Q415	2SD601A	-	-	-
Q416	2SB709A	-	-	-
Q417	2SB709A	-	-	-
Q418	2SB709A	-	-	-
R401	75 : CHIP	75 : CHIP	75 : CHIP	-
R407	75 : CHIP	75 : CHIP	75 : CHIP	-
R408	470K : CHIP	470K : CHIP	470K : CHIP	-
R409	470K : CHIP	470K : CHIP	470K : CHIP	-
R410	4.7K	4.7K	4.7K	-
R411	4.7K	4.7K	4.7K	-
R414	75 : CHIP	75 : CHIP	75 : CHIP	-
R415	4.7K : CHIP	4.7K : CHIP	4.7K : CHIP	-
R417	560 : RN-CP	560 : RN-CP	470 : RN-CP	470 : RN-CP
R418	-	-	100 : CHIP	100 : CHIP
R420	JW (S)	JW (S)	JW (S)	-
R422	JW (S)	JW (S)	JW (S)	-
R431	1K : CHIP	1K : CHIP	680 : CHIP	1K : CHIP
R432	0 : CHIP	0 : CHIP	680 : CHIP	0 : CHIP
R434	1K : CHIP	1K : CHIP	680 : CHIP	1K : CHIP
R435	0 : CHIP	0 : CHIP	680 : CHIP	0 : CHIP
R440	-	-	100 : CHIP	-
R442	-	-	100 : CHIP	100 : CHIP
R443	-	-	100 : CHIP	100 : CHIP
R444	82K : CHIP	82K : CHIP	82K : CHIP	-
R445	10K : CHIP	10K : CHIP	-	-
R446	10K : CHIP	10K : CHIP	-	-
R450	470 : CHIP	470 : CHIP	100 : CHIP	100 : CHIP
R451	4.7K : CHIP	4.7K : CHIP	-	-
R452	100 : CHIP	-	-	-
R453	-	-	820 : RN-CP	820 : RN-CP
R454	0 : CHIP	0 : CHIP	100 : CHIP	100 : CHIP
R456	470 : CHIP	470 : CHIP	-	-
R457	220 : CHIP	220 : CHIP	-	-
R458	220 : CHIP	220 : CHIP	-	-
R459	22K : CHIP	-	-	-
R460	330 : CHIP	-	-	-
R461	4.7K : CHIP	-	-	-
R462	4.7K : CHIP	-	-	-
R463	680 : CHIP	-	-	-
R464	680 : CHIP	-	-	-
R475	1K : CHIP	1K : CHIP	-	-
R476	22K : CHIP	-	-	-
R477	-	-	1K : CHIP	1K : CHIP
R478	470 : CHIP	470 : CHIP	-	-
R479	22K : CHIP	-	-	-
R480	22K : CHIP	-	-	-
R481	22K : CHIP	-	-	-
R488	22K : CHIP	-	-	-
R489	22K : CHIP	-	-	-
R490	0 : CHIP	0 : CHIP	-	-
R491	0 : CHIP	0 : CHIP	-	-
R492	0 : CHIP	0 : CHIP	-	-

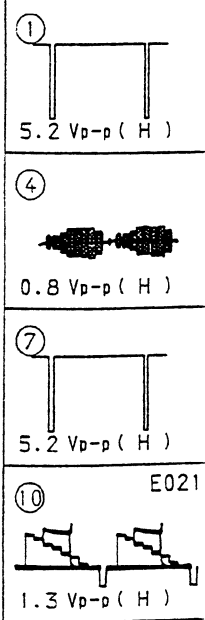








— P Board —







<p>①</p> <p>5.2 <math>V_{p-p}</math> ( H )</p>	<p>E021</p>
<p>④</p> <p>0.8 <math>V_{p-p}</math> ( H )</p>	
<p>⑦</p> <p>5.2 <math>V_{p-p}</math> ( H )</p>	
<p>⑩</p> <p>1.3 <math>V_{p-p}</math> ( H )</p>	



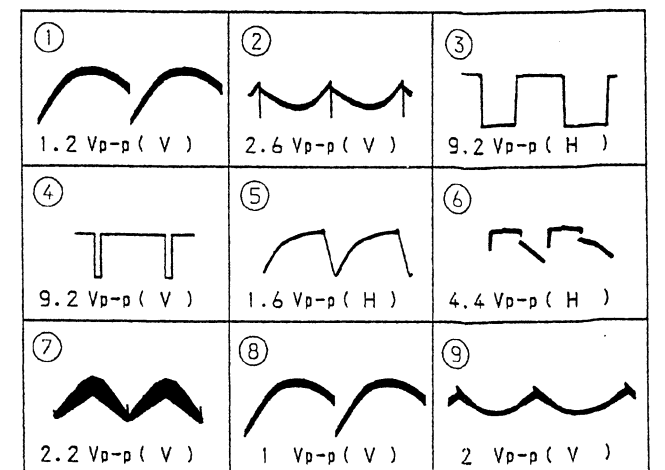




**KV-27TS29/27TS32/27TS36**  
RM-Y118 RM-Y117 RM-Y118

**KV-32TS36/32TS46**  
RM-Y118 RM-Y118  
SA-W200

— E Board —





V-27TS29/27TS32/27TS36  
RM-Y116 RM-Y117 RM-Y118  
V-32TS36/32TS46  
RM-Y116 RM-Y118 SA-W200

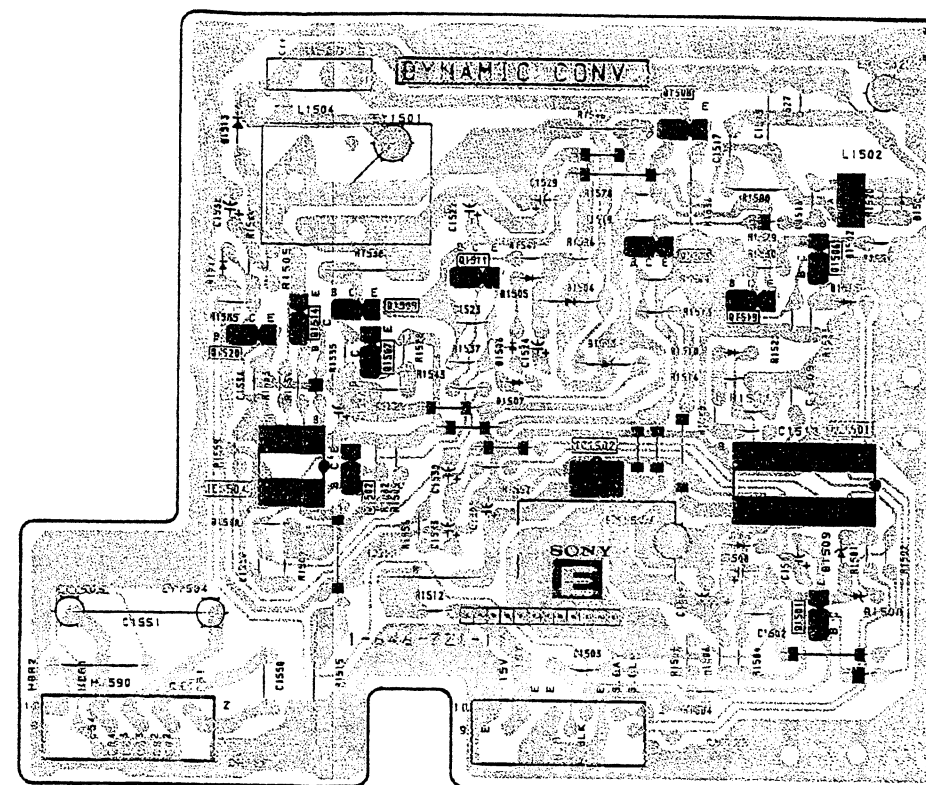
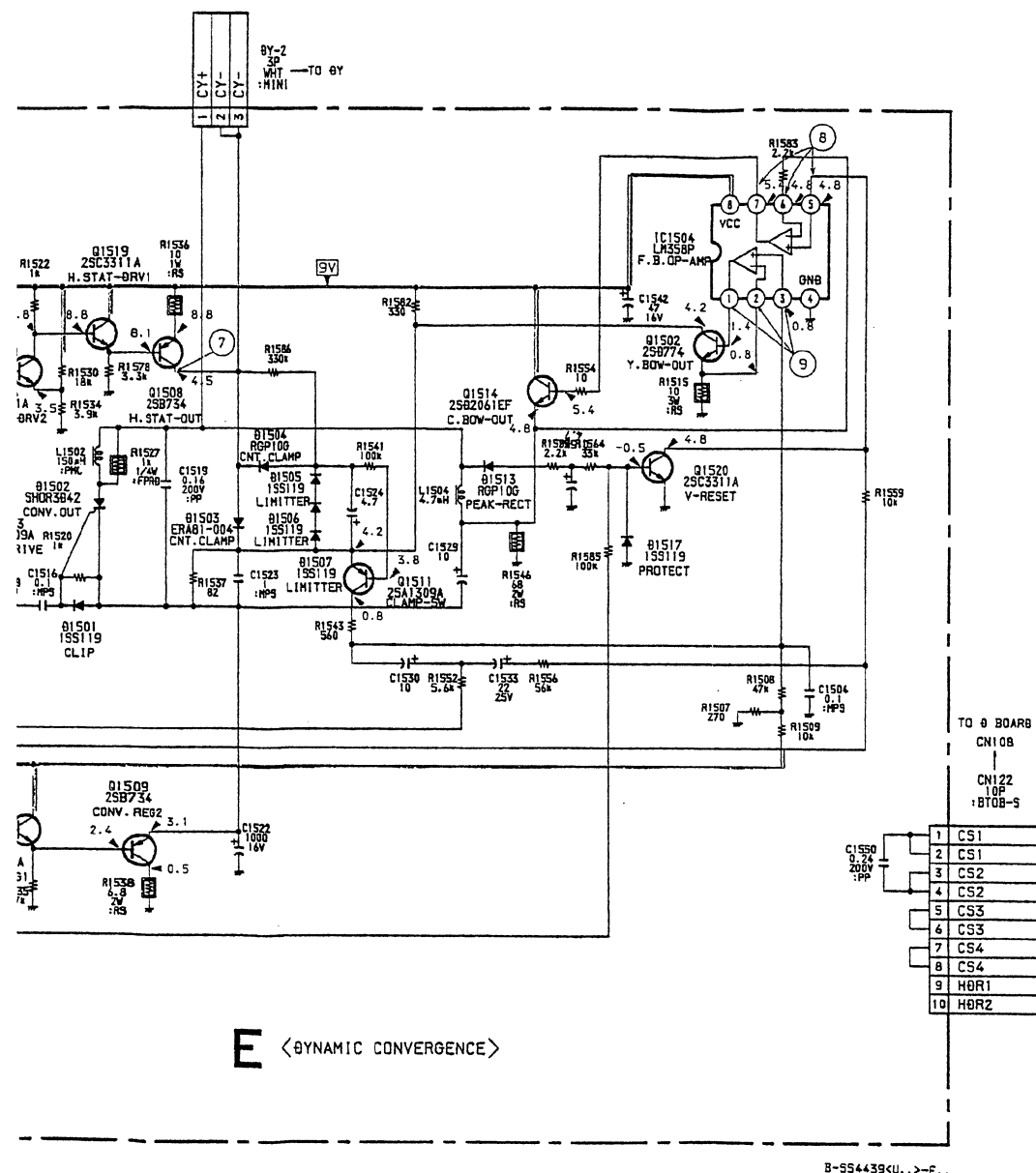
KV-27TS29/27TS32/27TS36  
RM-Y116 RM-Y117 RM-Y118  
KV-32TS36/32TS46  
RM-Y116 RM-Y118 SA-W200

KV-27TS29/27TS32/27TS36  
RM-Y116 RM-Y117 RM-Y118  
KV-32TS36/32TS46  
RM-Y116 RM-Y118 SA-W200

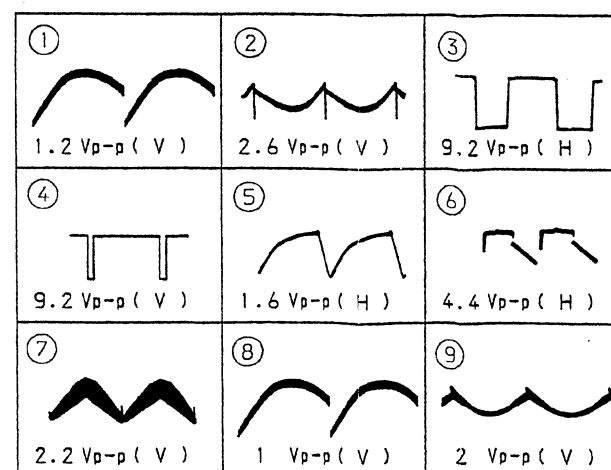
7 8 9 10 11 12

**E** [DYNAMIC CONVERGENCE]

— E Board —



— E Board —

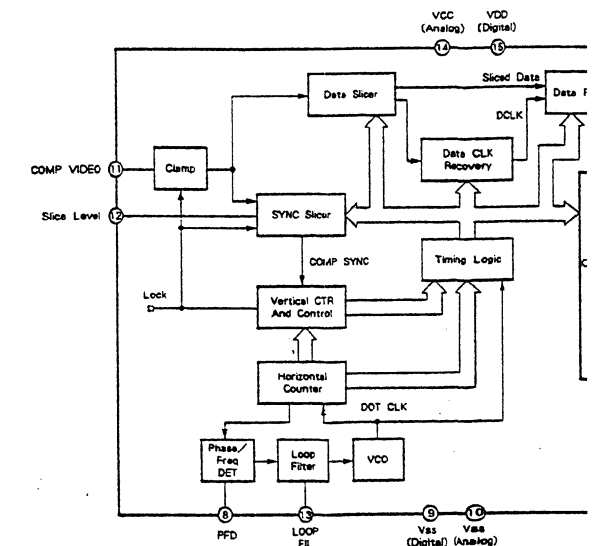




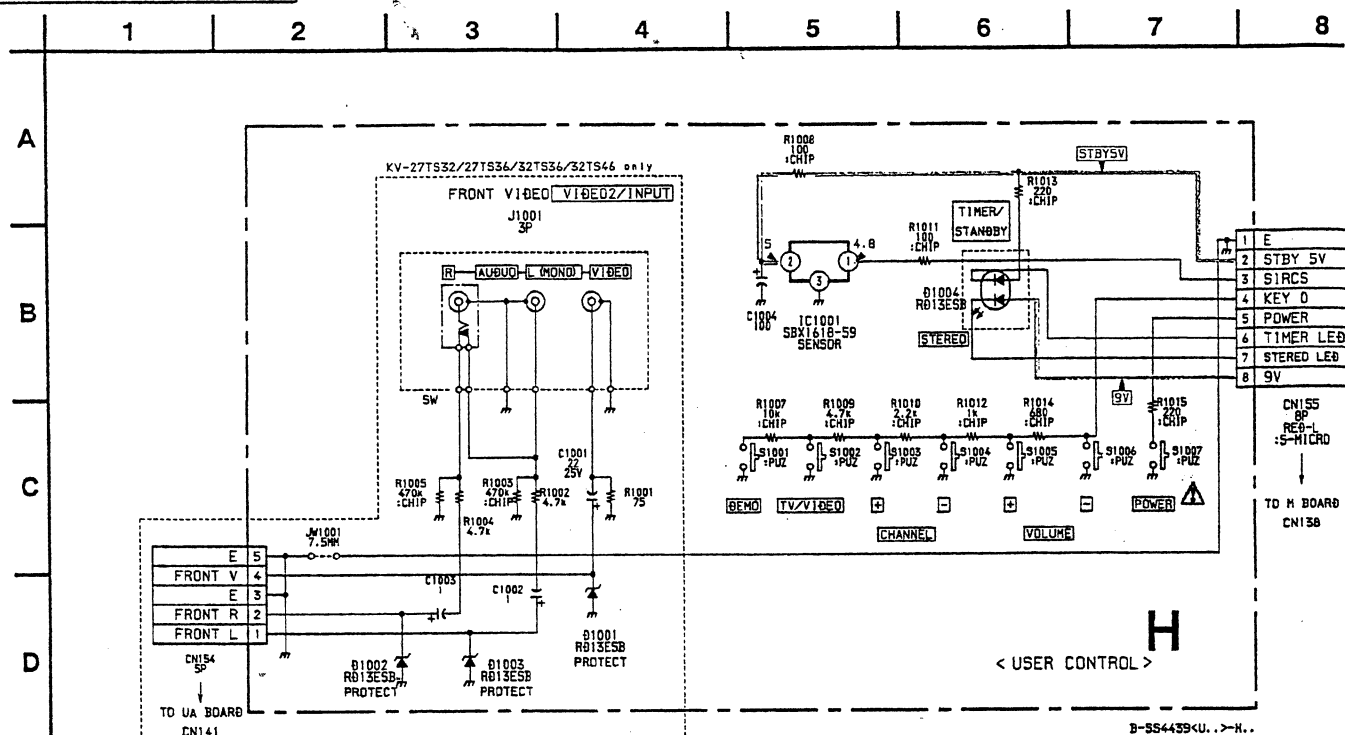
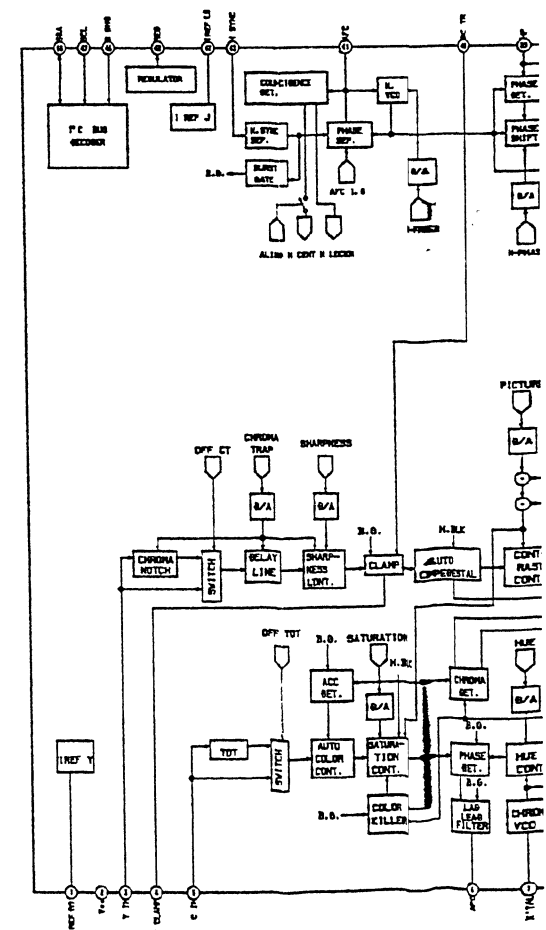
KV-27TS29/27TS32/27TS36  
RM-Y116 RM-Y117 RM-Y118  
KV-32TS36/32TS46  
RM-Y118 RM-Y118  
SA-W200

KV-27TS29/27TS32/27TS36  
RM-Y116 RM-Y117 RM-Y118  
KV-32TS36/32TS46  
RM-Y118 RM-Y118  
SA-W200

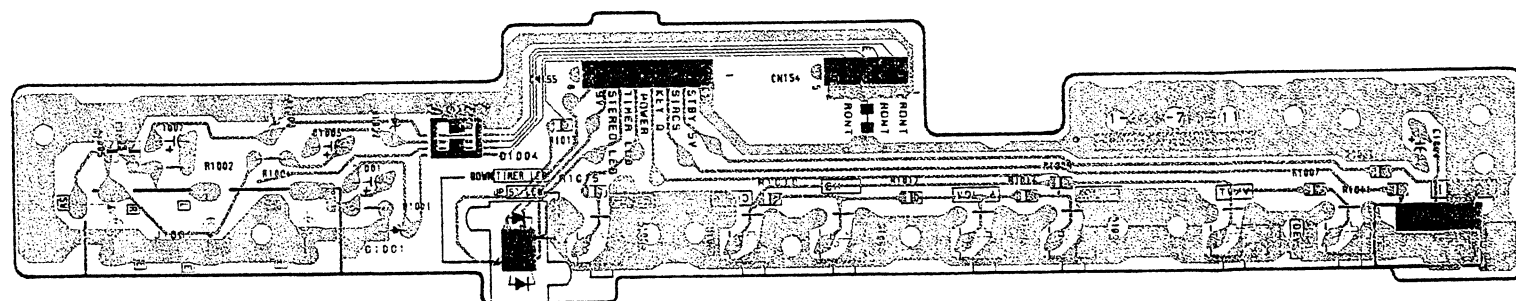
M Board IC150 MC144143



M Board IC301 CXA1465AS

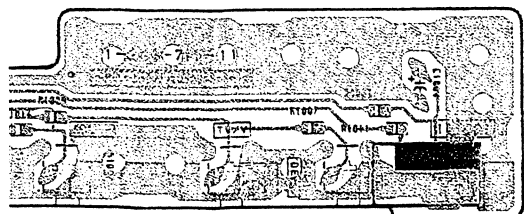
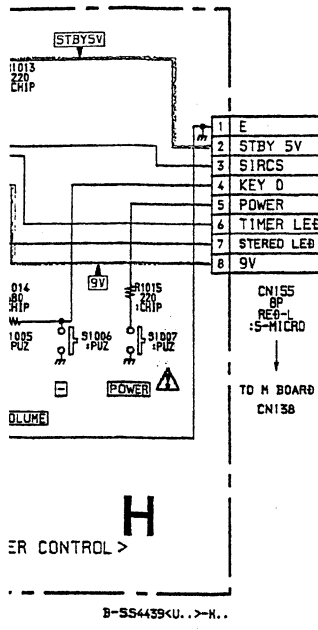


**H** [USER CONTROL]  
— H Board —



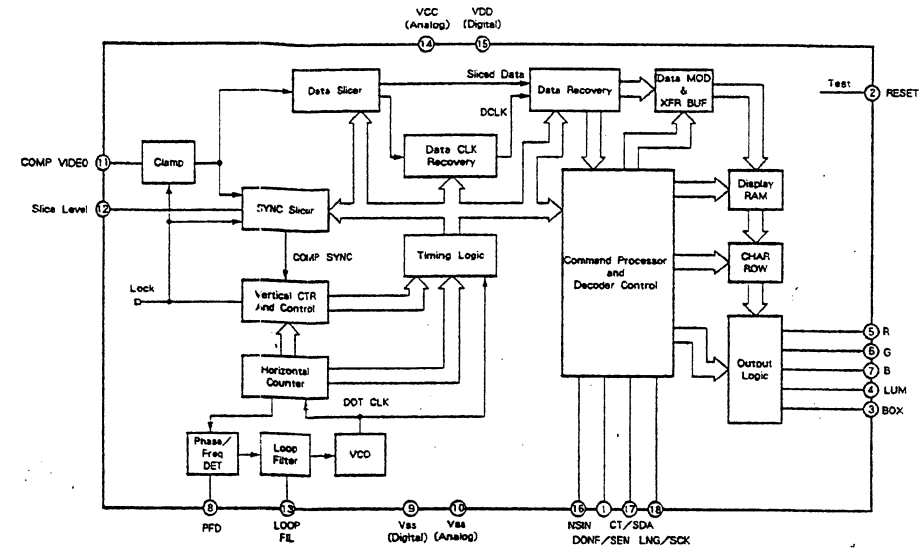


7 8

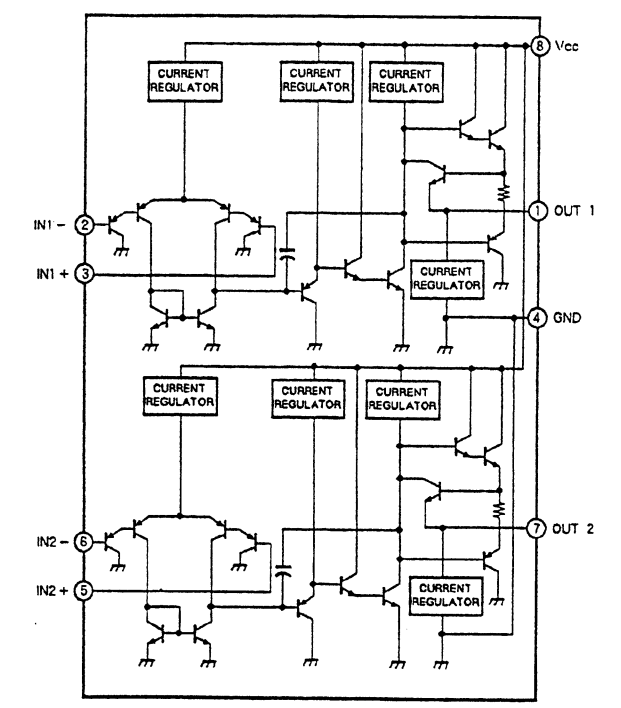


KV-27TS29/27TS32/27TS36  
RM-Y116 RM-Y117 RM-Y118  
KV-32TS36/32TS46  
RM-Y116 RM-Y117 RM-Y118  
SA-W200

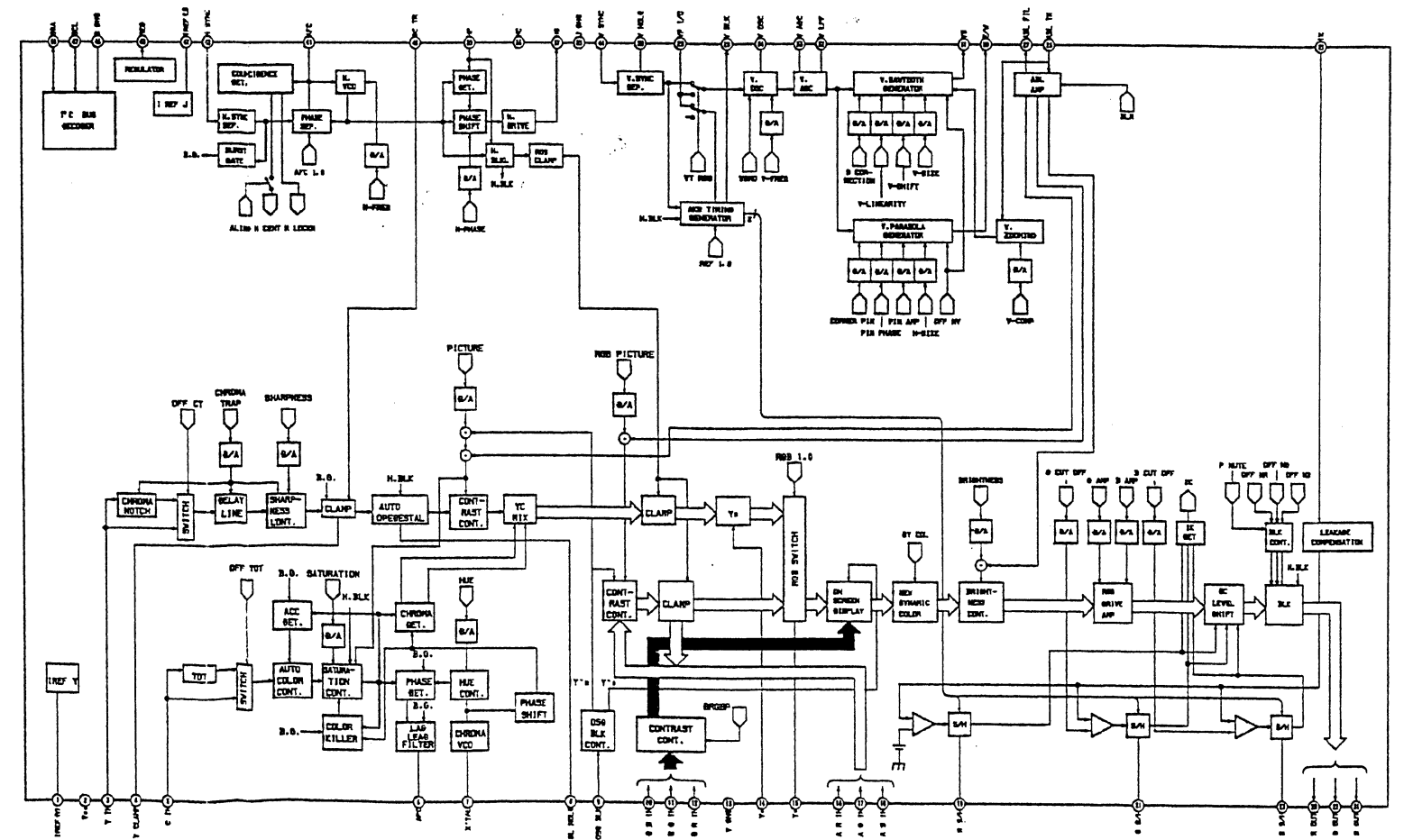
M Board IC150 MC144143



M Board IC202 LM358PS



M Board IC301 CXA1465AS

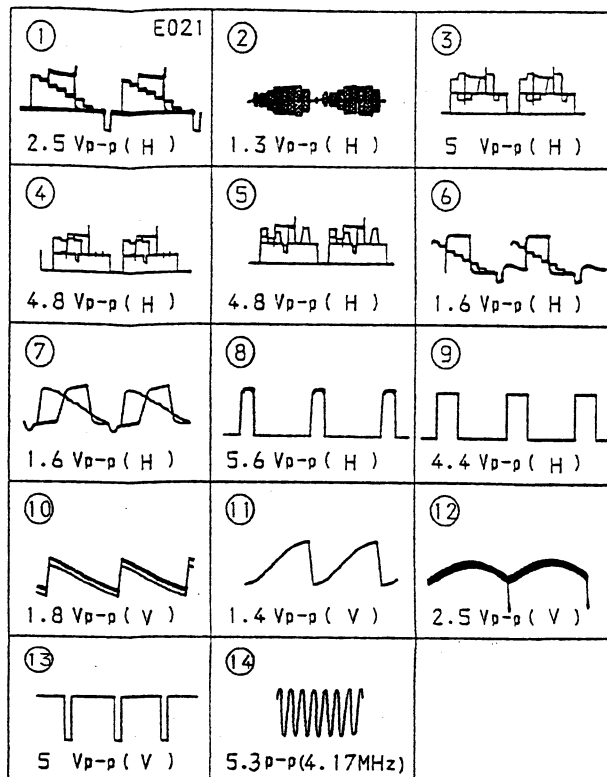




— M Board —

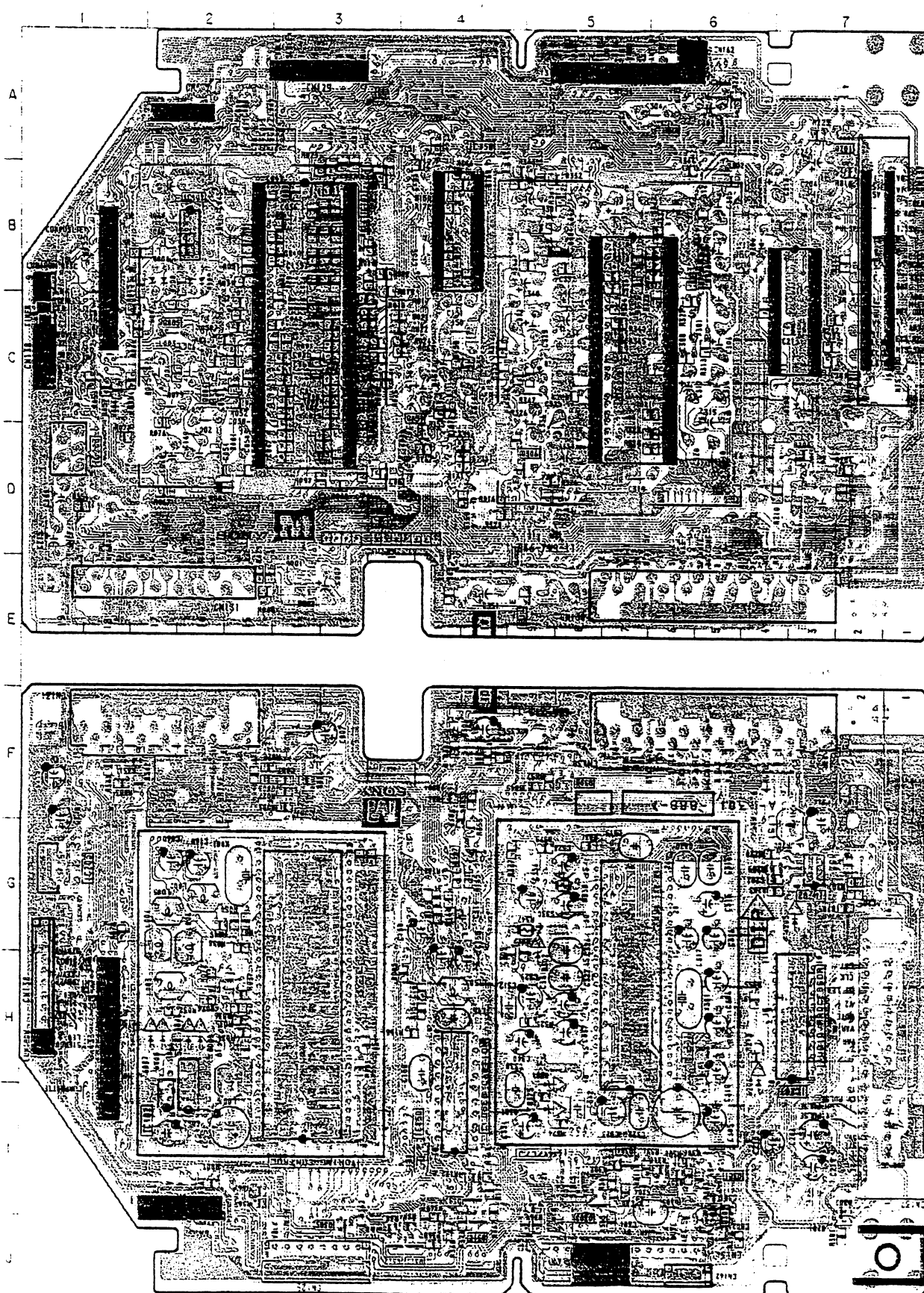
— M Board —

IC	DIODE
IC101 C-3	D001 E-3
IC102 B-2	D002 E-3
IC150 B-4	D004 F-4
IC201 C-7	D005 D-2
IC202 G-7	D006 B-2
IC301 C-5	D007 B-2
	D008 B-2
	D009 B-2
	D150 C-4
	D201 J-7
	D202 I-7
	D205 C-7
	D206 B-6
	D301 B-5
	D304 B-5
	D305 F-5
	D306 F-4
TRANSISTOR	
Q001 F-3	
Q002 D-4	
Q004 C-2	
Q005 C-2	
Q151 D-4	
Q201 A-7	
Q301 I-6	
Q302 I-6	
Q307 G-4	
Q308 F-5	
Q314 E-4	



**M** Y/C/J, CONTROL, AUDIO CONTROL,  
CLOSED CAPTION

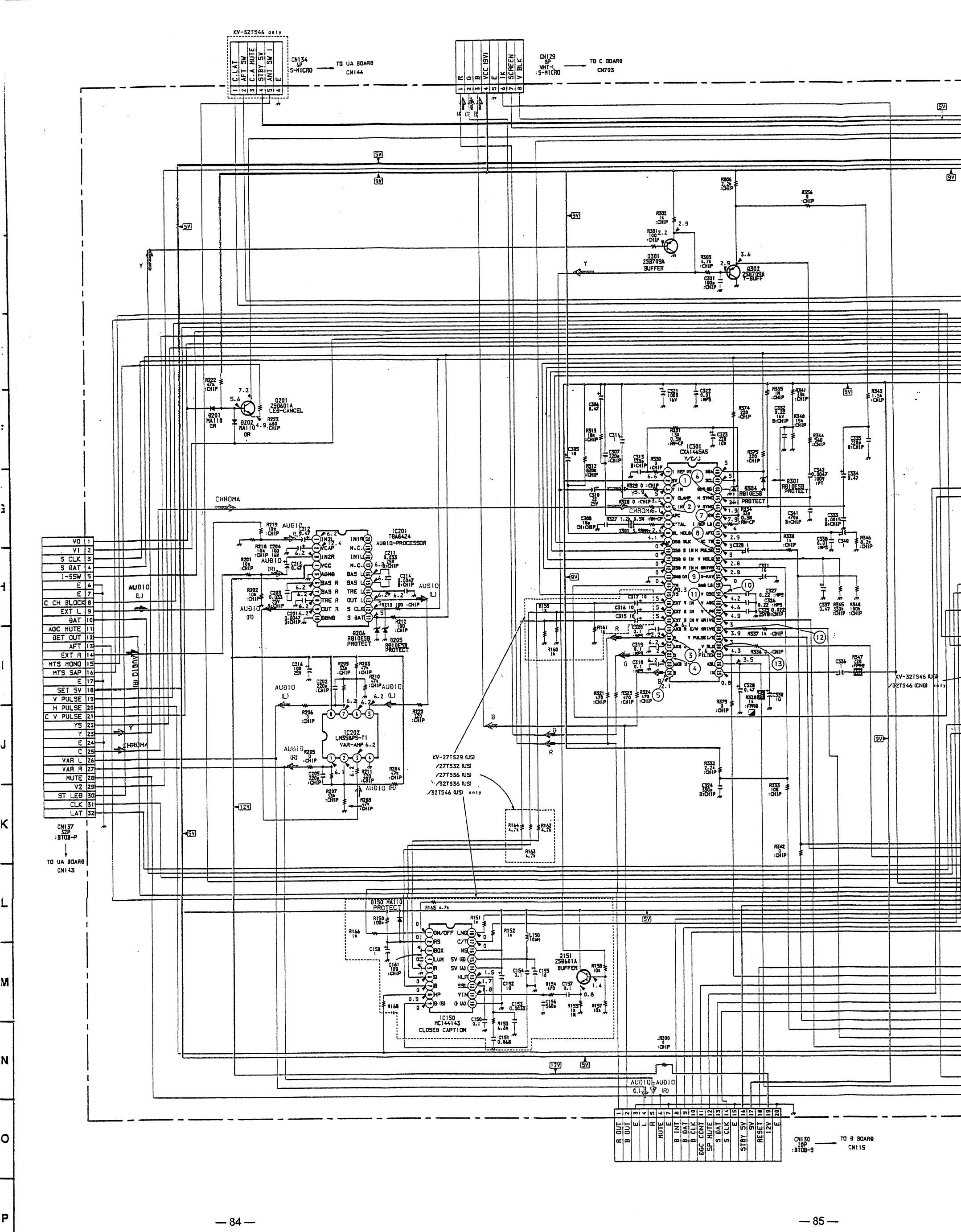
— M Board —



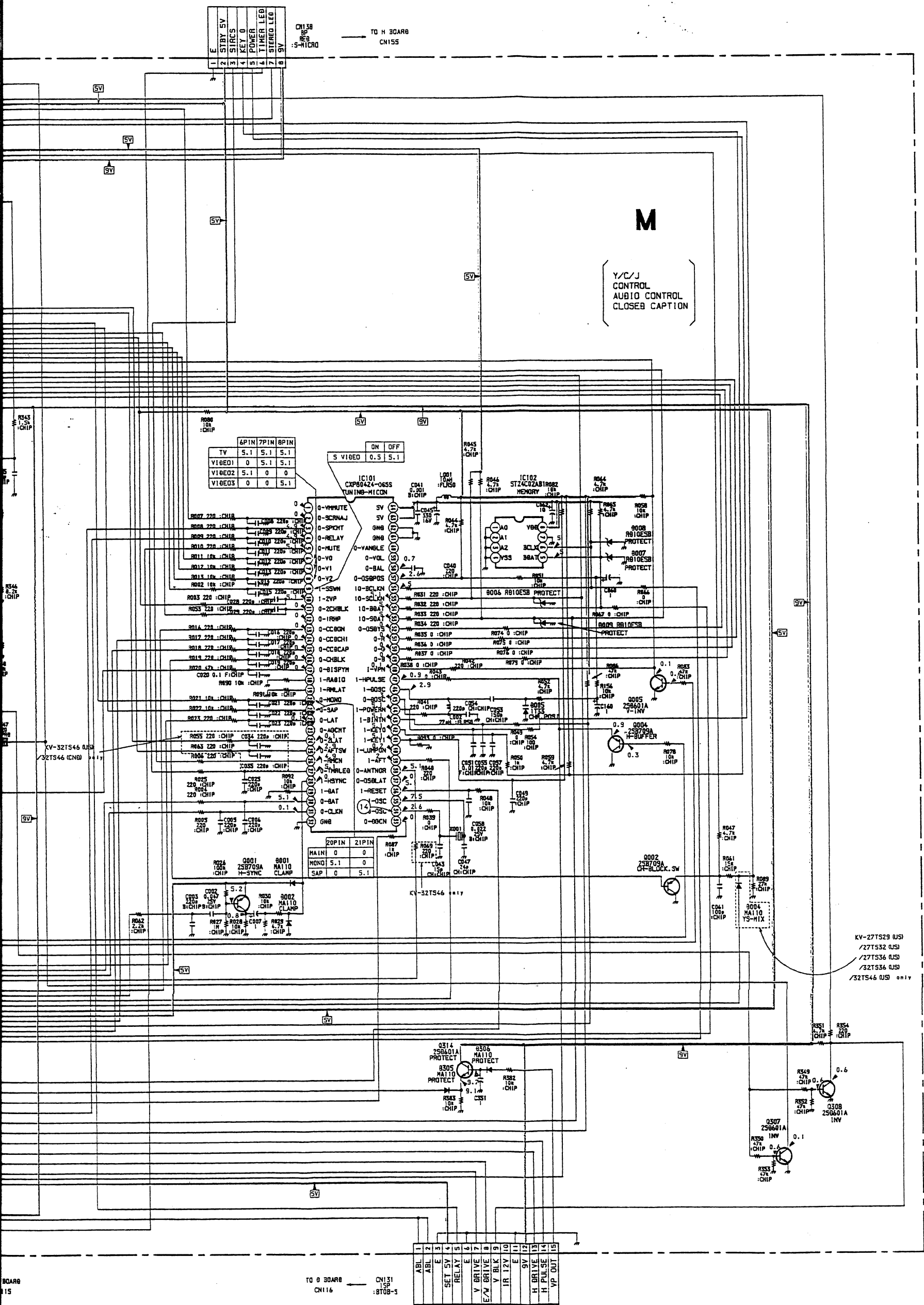




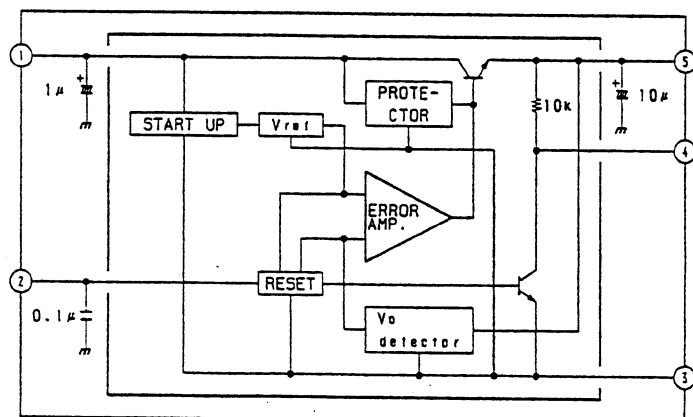





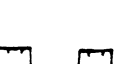
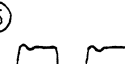
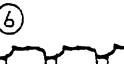
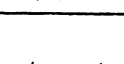
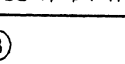
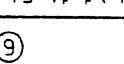
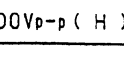
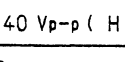
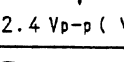


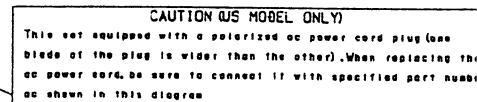




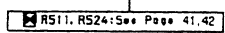




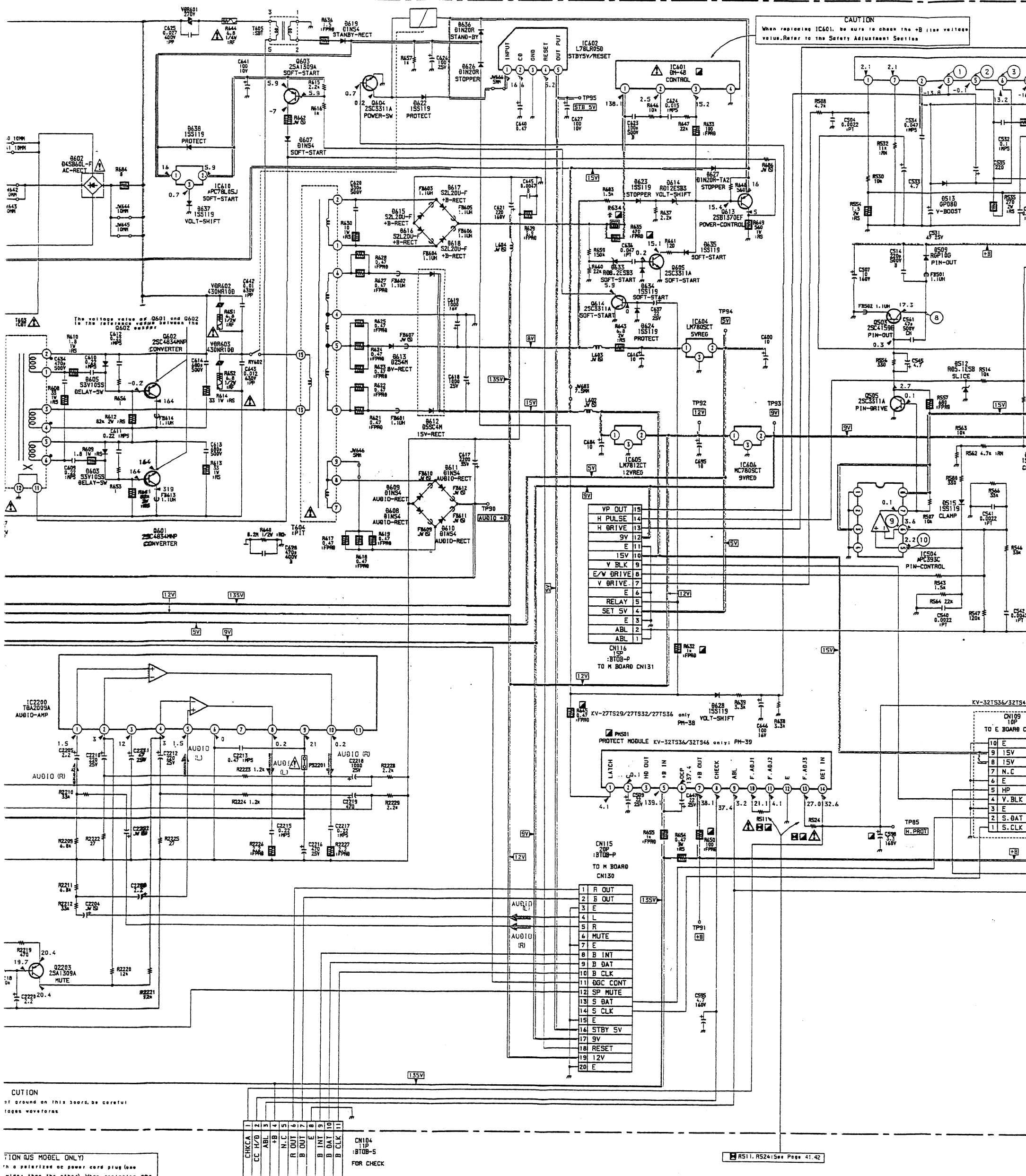
<p>①</p>  <p>30 V<sub>p-p</sub> ( V )</p>	<p>②</p>  <p>60 V<sub>p-p</sub> ( V )</p>	<p>③</p>  <p>32 V<sub>p-p</sub> ( V )</p>
<p>④</p>  <p>3.5 V<sub>p-p</sub> ( H )</p>	<p>⑤</p>  <p>185 V<sub>p-p</sub> ( H )</p>	<p>⑥</p>  <p>19 V<sub>p-p</sub> ( H )</p>
<p>⑦</p>  <p>1000V<sub>p-p</sub> ( H )</p>	<p>⑧</p>  <p>140 V<sub>p-p</sub> ( H )</p>	<p>⑨</p>  <p>2.4 V<sub>p-p</sub> ( V )</p>
<p>⑩</p>  <p>3.6 V<sub>p-p</sub> ( H )</p>	<p>⑪</p>  <p>230 V<sub>p-p</sub> ( H )</p>	<p>⑫</p>  <p>2.8 V<sub>p-p</sub> ( V )</p>



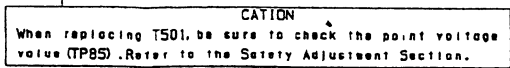








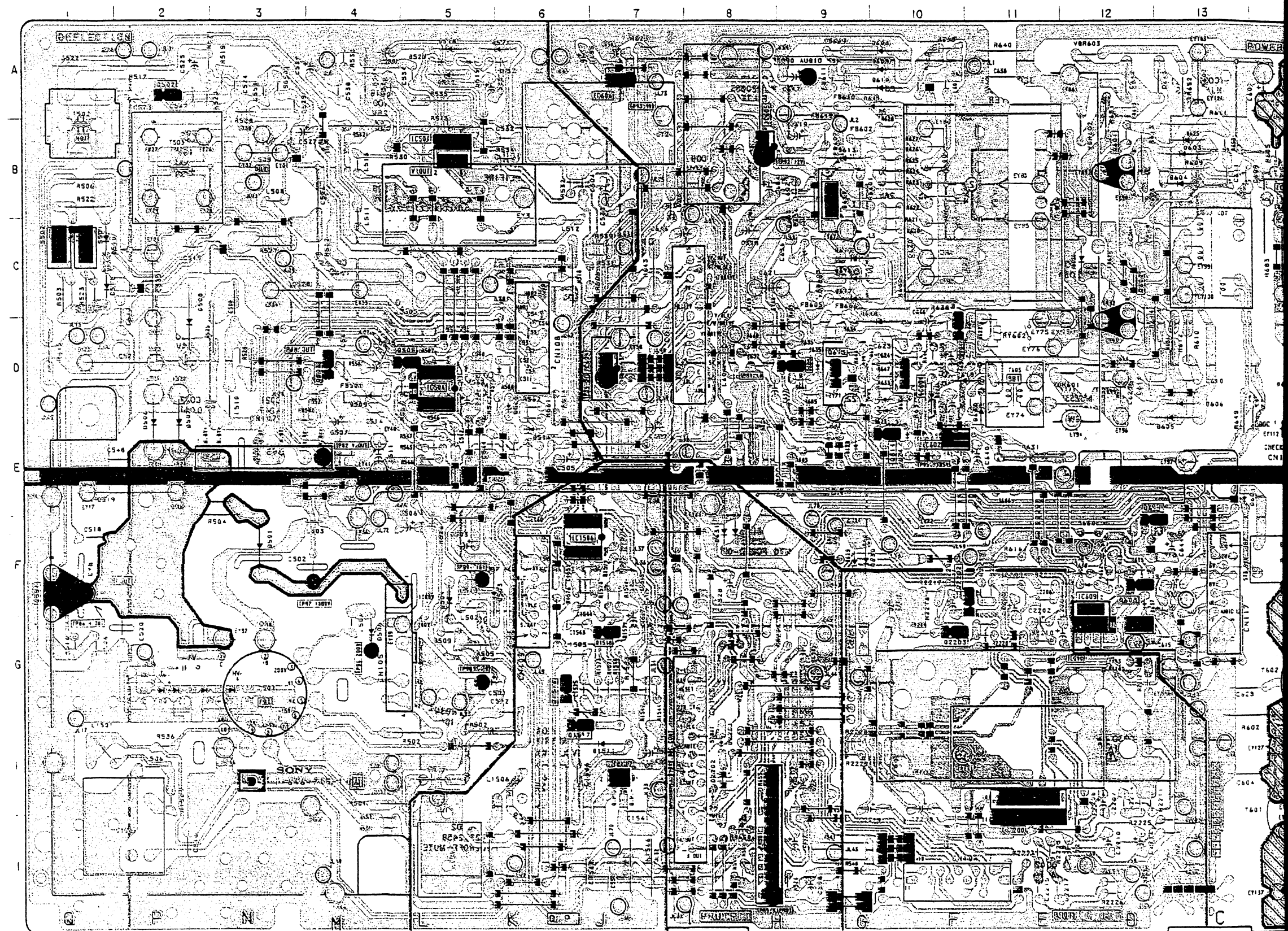




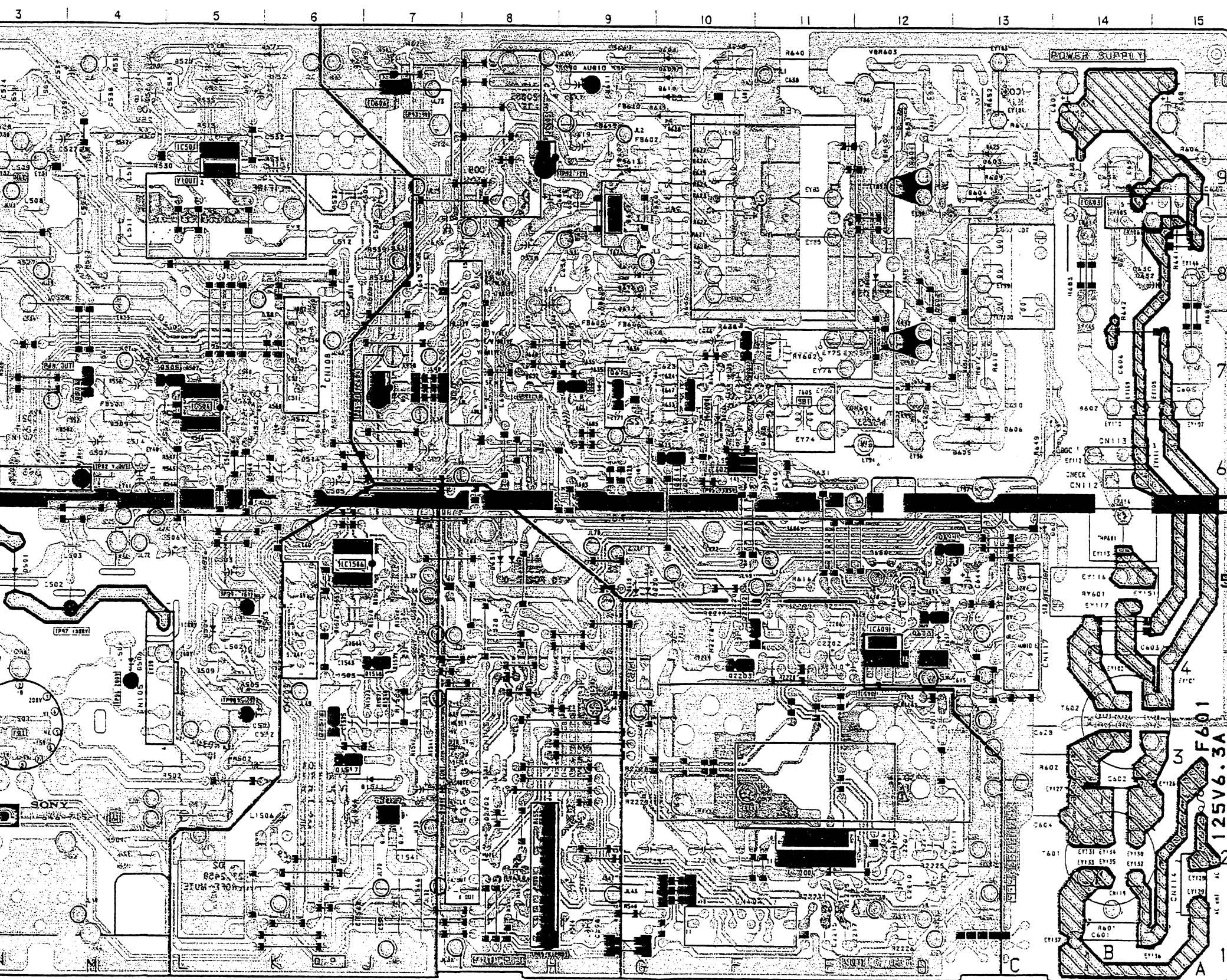


D

— D Board —

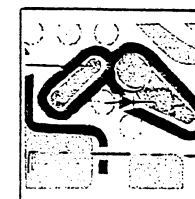






— D Board —

IC		
IC501	B-5	D603 B-13
IC504	D-5	D605 E-13
IC601	D-10	D607 F-12
IC602	E-10	D608 A-10
IC604	D-7	D609 A-10
IC605	B-8	D610 A-10
IC606	A-7	D611 A-10
IC610	G-12	D612 B-9
IC2200	I-11	D613 B-9
		D614 D-10
		D615 C-9
		D616 C-9
		D617 C-9
		D618 D-10
		D619 D-10
		D622 D-11
		D623 D-10
		D624 E-10
		D626 D-10
		D627 D-9
		D628 E-9
		D629 F-9
		D630 F-9
		D631 F-8
		D632 F-8
		D633 C-9
		D634 C-9
		D635 D-9
		D636 D-11
		D637 F-12
		D638 F-12
		D2201 H-8
TRANSISTOR		
Q502	A-2	
Q503	D-4	
Q505	D-5	
Q591	F-1	
Q601	B-12	
Q602	C-12	
Q603	F-12	
Q604	D-10	
Q605	D-9	
Q611	F-12	
Q613	D-9	
Q614	E-10	
Q2202	F-10	
Q2203	G-10	
DIODE		
D501	F-3	
D502	H-5	
D503	F-5	
D504	F-5	
D505	G-4	
D506	E-2	
D507	E-2	
D508	C-2	
D509	D-4	
D510	C-1	
D511	C-1	
D512	D-7	
D513	A-5	
D514	E-6	
D515	D-6	
D601	E-13	
D602	D-14	
TEST POINT		
TP82	E-4	
TP84	F-1	
TP85	I-8	
TP90	A-9	
TP91	D-8	
TP92	B-8	
TP93	A-7	
TP94	D-7	
TP95	E-10	
TP96	G-4	
TP97	F-3	
TP98	G-5	
TP99	F-5	



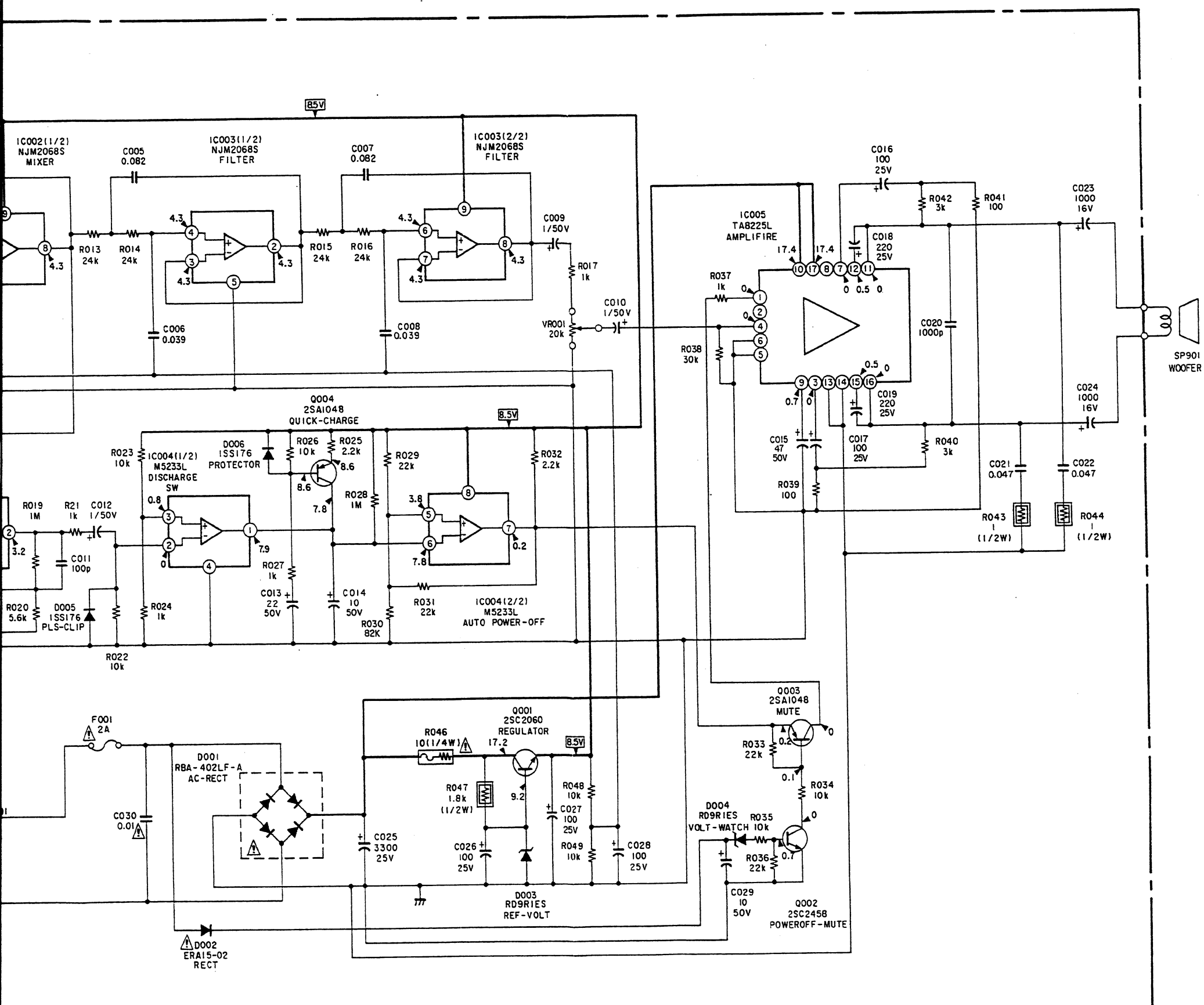
**NOTE:**  
The circuit indicated as left contains high voltage of over 600 Vp-p. Care must be paid to prevent an electric shock in inspection or repairing.







7 8 9 10 11 12 13 14 15 16 17 18 19





# SUPER WOOFER

— SUPER WOOFER Board —

KV-27TS29/27TS32/27TS36

RM-Y116 RM-Y117 RM-Y118

KV-32TS36/32TS46

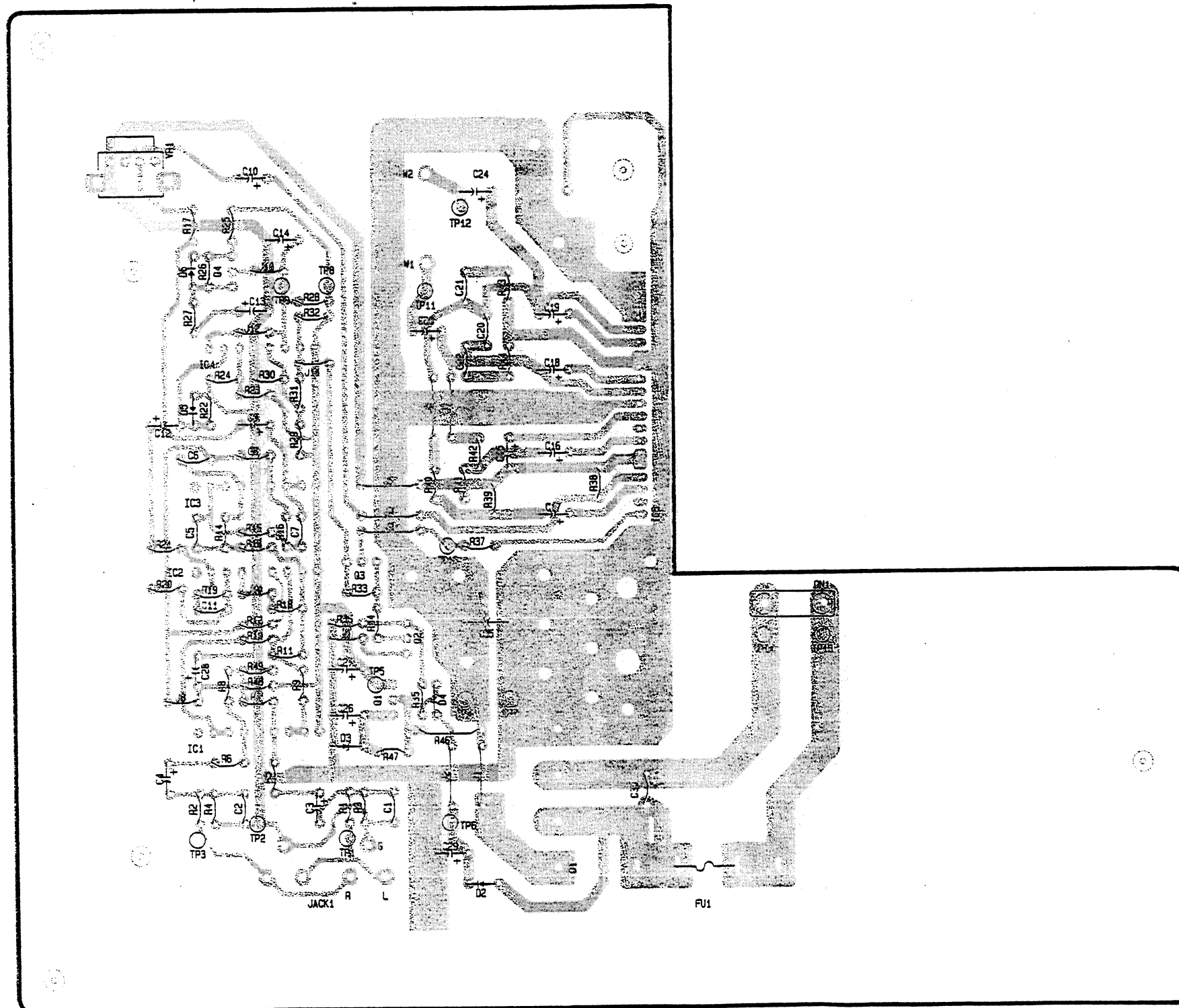
RM-Y116 RM-Y118  
SA-W200

KV-27TS29/27TS32/27TS36

RM-Y116 RM-Y117 RM-Y118

KV-32TS36/32TS46

RM-Y116 RM-Y118  
SA-W200



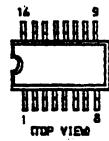


KV-27TS29/27TS32/27TS36  
RM-Y116 RM-Y117 RM-Y118  
KV-32TS36/32TS46  
RM-Y116 RM-Y118  
SA-W200

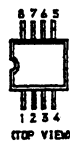
KV-27TS29/27TS32/27TS36  
RM-Y116 RM-Y117 RM-Y118  
KV-32TS36/32TS46  
RM-Y116 RM-Y118  
SA-W200

## 6-5. SEMICONDUCTORS

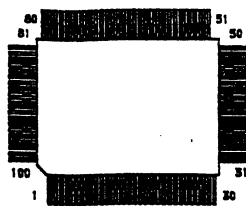
BU4053BF  
CXA1315M



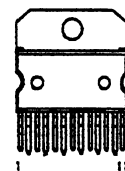
LM358PS  
MM1114XFF  
MM1118XFF



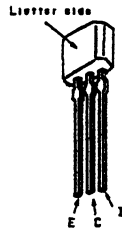
MB86144



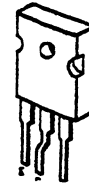
TDA2009A



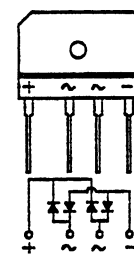
2SA1175  
2SA1309A  
2SC2785-HFE  
2SC3311A



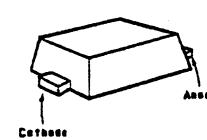
2SC3271F



Ø4SB60L  
RBA-402LF-A



HVU359-TRU



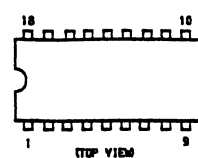
CXA1465AS  
CXA1545AS



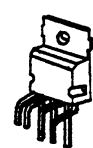
LM7805CT  
LM7812CT  
MC7809CT  
RC7809FA



MC144143  
Z86128120PSC



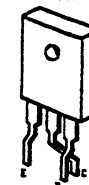
TDA8172



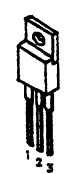
2SB1370  
2SC4159  
2SB2012  
2SB2061



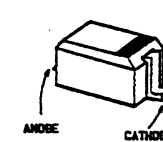
2SC4834MNP



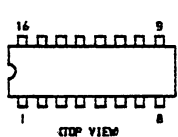
Ø5SC4MR



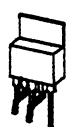
MA110  
1T33



CXA1526P



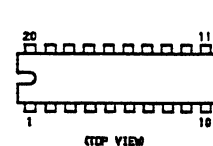
L78LR05Ø-MA



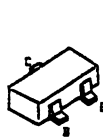
M5233L



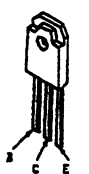
TDA8429



2SB709A  
2SB601A



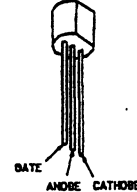
2SC4927



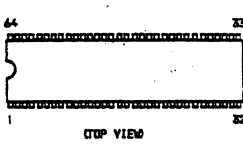
EGR20G  
EGR20G-TKG23  
EL1Z  
ERA81-004TP1  
G08Ø  
RGP02-17  
RGP02-17PKG23  
RGP10GPK23  
ISS176



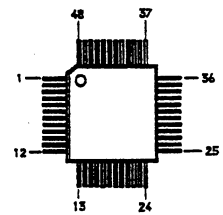
SHOR3Ø42



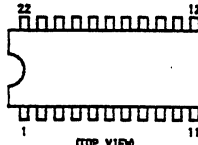
CXP80424-SV4397



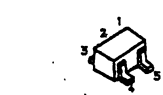
MB3512PF-EF



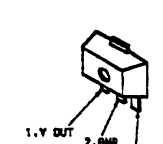
M52470AP



TS7SU04F



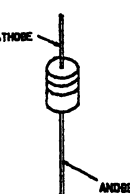
µPC78L05T



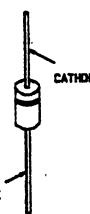
2SB734  
2SB774



Ø1NS4  
Ø1N20R  
ERA15-02  
ERA82-004  
ERA83-006  
RØ10ESB  
RØ10ESB2  
RØ12ESB3  
RØ13ESB  
RØ13ESB2  
RØ33ESB1  
RØ33ESB2  
RØ3.6ESB1  
RØ5.1ESB  
RØ5.1ESB1  
RØ8.2ESB3  
RØ9R1ES  
ISS119



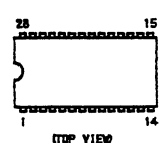
ERC06-15S  
RU-3AM  
S2L20UF  
S3V105S



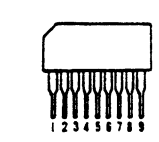
ØM-48  
PM-38  
PM-39



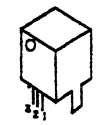
MB40176PF-EF



NJM2068S



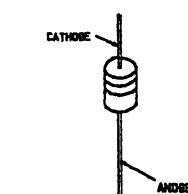
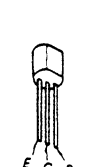
SBX1618-51



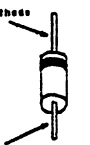
2SA1091  
2SA1091R



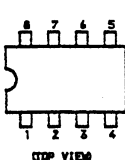
2SC2060



ERØ29-Ø8J



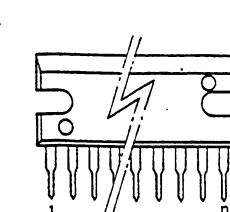
LM358P  
µPC358C  
µPC393C  
24C02A1/P



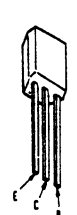
MB81461-12-PSZ-G-BF2



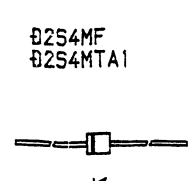
TA8225L



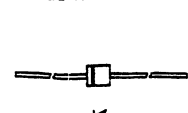
2SA1048  
2SA2458



2SC2688



Ø2S4MF  
Ø2S4MTA1





## SECTION 7

### EXPLODED VIEWS

## NOTE:

- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked "\*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

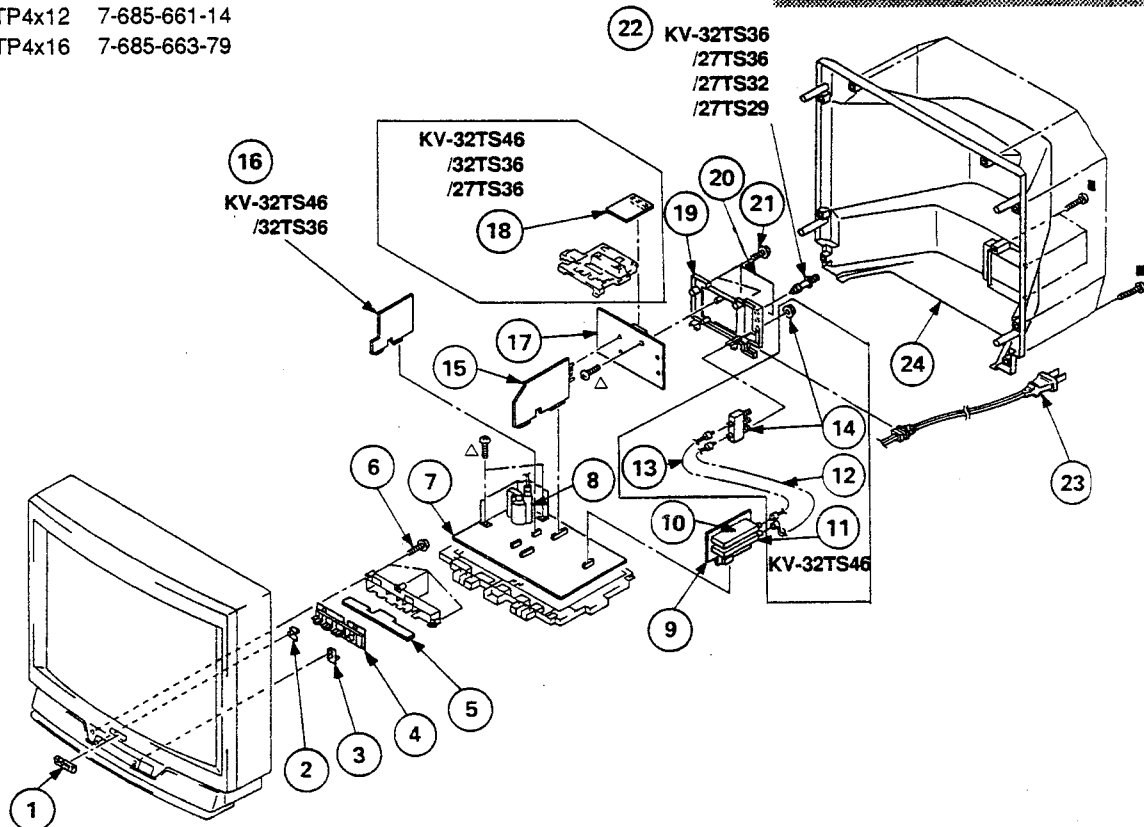
The components identified by shading and mark  $\Delta$  are critical for safety.  
Replace only with part number specified.

Les composants identifiés par une trame et une marque  $\Delta$  sont critiques pour la sécurité.  
Ne les remplacer que par une pièce portant le numéro spécifié.

#### 7-1. CHASSIS

$\Delta$ : BVTP4x12 7-685-661-14

■: BVTP4x16 7-685-663-79



REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
1	4-394-048-01	EMBLEM (NO.9), SONY		15	*A-1306-433-A	M BOARD, COMPLETE (KV-32TS46 (CND))	
2	4-039-458-01	FILTER, REMOTE		15	*A-1306-434-A	M BOARD, COMPLETE (KV-32TS46 (US))	
3	4-039-457-01	GUIDE, LED		16	*A-1341-622-A	E BOARD, COMPLETE (KV-32TS46/32TS36)	
4	4-039-525-01	BUTTON, MULTI		17	*A-1394-415-A	UA BOARD, COMPLETE (KV-32TS36/27TS36)	
5	*1-646-717-11	H BOARD		17	*A-1394-441-A	UA BOARD, COMPLETE (KV-27TS32)	
6	4-319-520-11	SCREW, SPECIAL (+PW4X30)		17	*A-1394-437-A	UA BOARD, COMPLETE (KV-27TS29)	
7	*A-1346-112-A	D BOARD, COMPLETE (KV-32TS46/32TS36)		17	*A-1394-435-A	UA BOARD, COMPLETE (KV-32TS46)	
7	*A-1346-129-A	D BOARD, COMPLETE (KV-27TS36/27TS32/27TS29)		18	*A-1195-062-A	P BOARD, COMPLETE (KV-32TS46/32TS36/27TS36)	
8	$\Delta$ 1-453-146-11	TRANSFORMER ASSY, FLYBACK (NX-2604A3)		19	4-039-517-01	TERMINAL BOARD, ANTENNA (KV-32TS46)	
9	*A-1297-065-A	A BOARD, COMPLETE (KV-32TS36/27TS36/27TS32/27TS29)		19	4-039-524-01	TERMINAL BOARD, ANTENNA (KV-32TS36/27TS36/27TS29/27TS29)	
9	*A-1297-112-A	A BOARD, COMPLETE (KV-32TS46)		20	4-040-090-01	LABEL, TERMINAL (KV-27TS32)	
10	$\Delta$ 8-598-039-00	TUNER BTF-WA401		20	4-039-903-01	LABEL, TERMINAL (KV-27TS29)	
11	$\Delta$ 8-598-047-00	TUNER BTF-WA401		20	4-039-834-01	LABEL, TERMINAL (KV-32TS46/32TS36/27TS36)	
12	*1-751-136-11	CABLE, PIN (KV-32TS46)		21	4-382-854-11	SCREW (M3X10), P, SW (+)	
13	*1-751-135-11	CABLE, PIN (KV-32TS46)		22	1-573-657-11	PLUG, P-PIN (KV-32TS36/27TS36/27TS29/27TS29)	
14	1-417-178-11	SELECTOR, ANTENNA (AS-2) (KV-32TS46)		23	1-751-059-11	CORD, POWER (WITH CONNECTOR) 10A/120V	
15	*A-1306-427-A	M BOARD, COMPLETE (KV-32TS36/27TS36/27TS32/27TS29 (US))		24	4-039-463-01	COVER, REAR (KV-27TS36/27TS29/27TS29)	
15	*A-1306-432-A	M BOARD, COMPLETE (KV-32TS36 (CND)/27TS36 (CND)/27TS32/27TS29 (CND))		24	4-039-634-01	COVER, REAR (KV-32TS36/32TS36)	



KV-27TS29/27TS32/27TS36

RM-Y116 RM-Y117 RM-Y118

KV-32TS36/32TS46

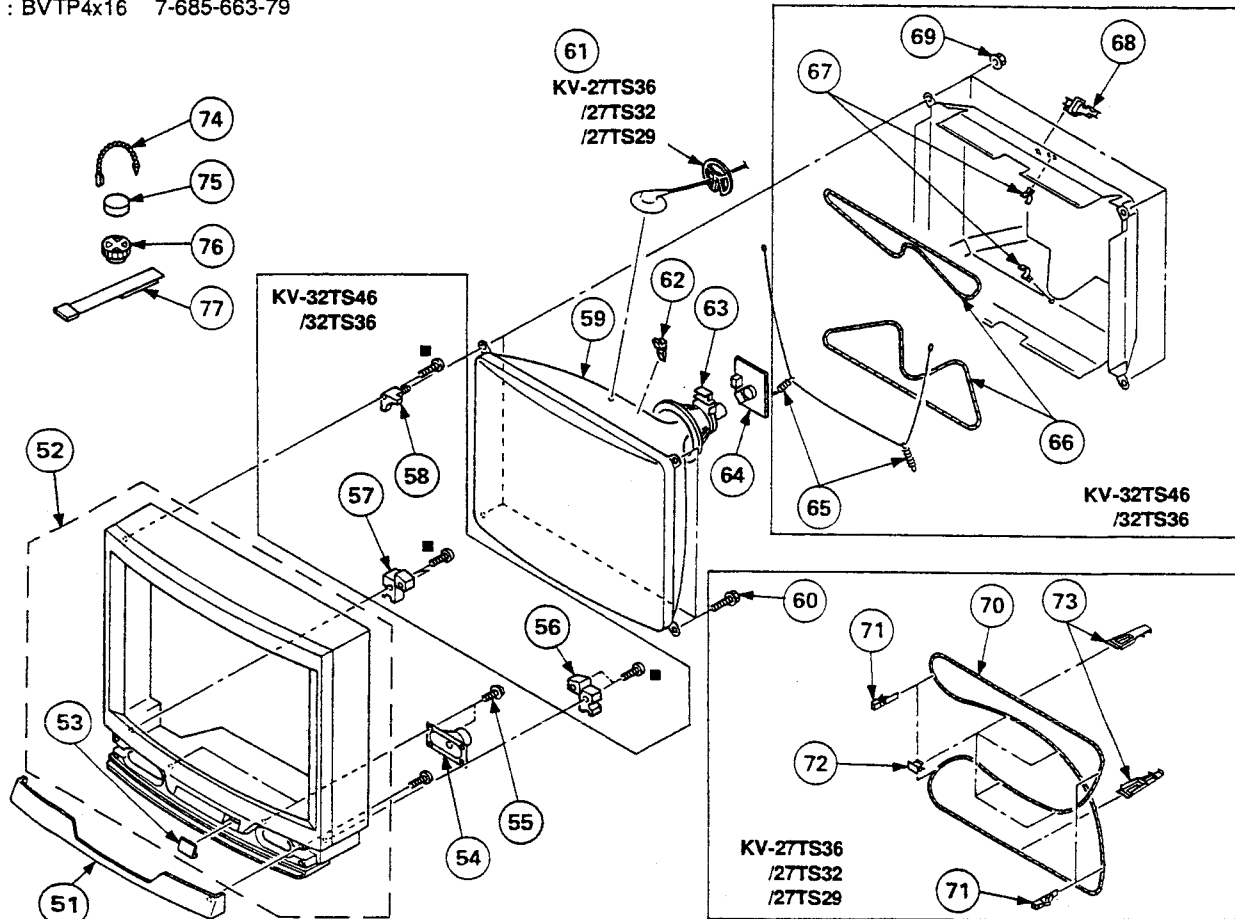
RM-Y118 RM-Y118  
SA-W200

Les composants identifiés par une trame et une  
marque  $\Delta$  sont critiques pour la sécurité.  
Ne les remplacer que par une pièce portant le  
numéro spécifié.

The components identified by shading and mark  $\Delta$   
are critical for safety.  
Replace only with part number specified.

## 7-2. PICTURE TUBE

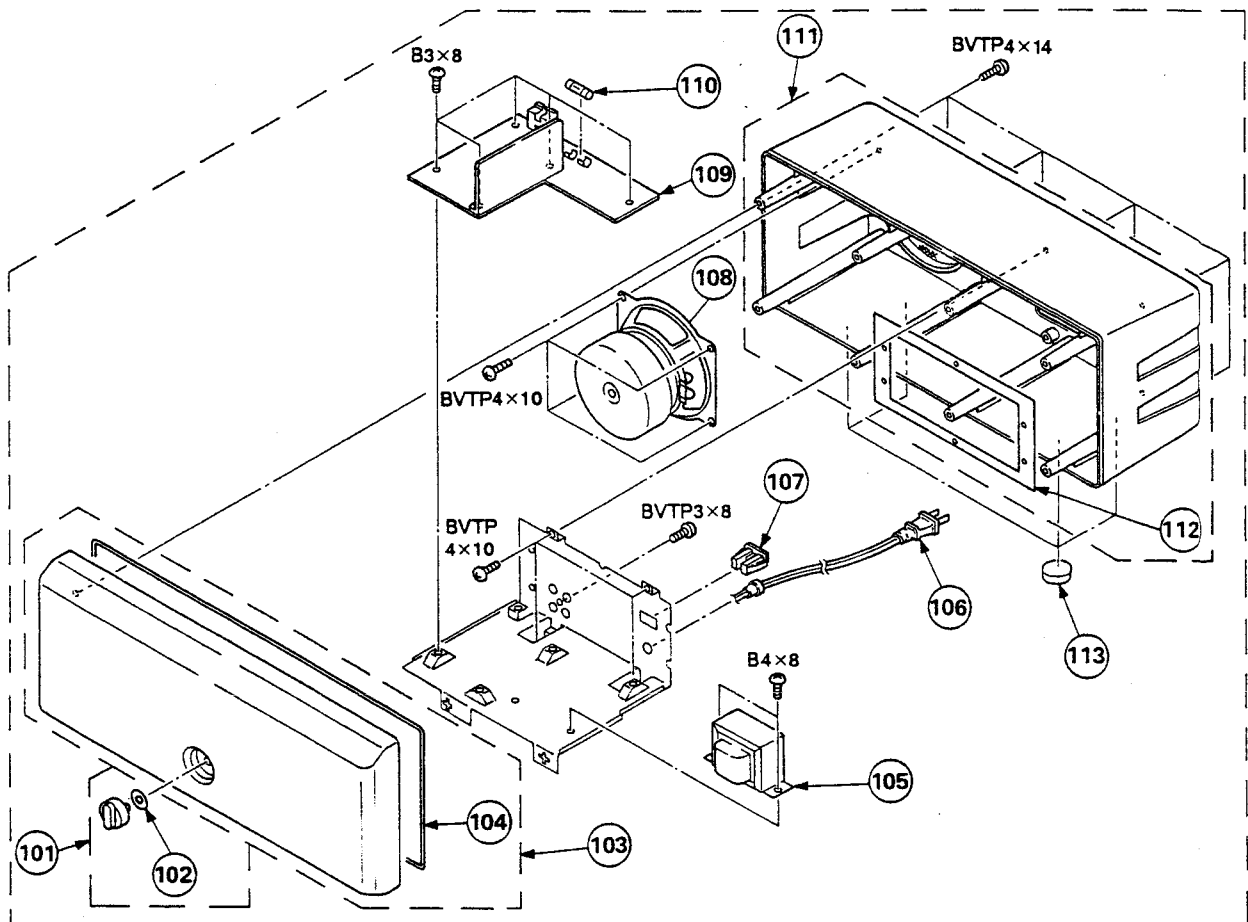
■ : BVTP4x16 7-685-663-79



REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
51	X-4031-018-1	GRILLE ASSY, SPEAKER (KV-32TS46/32TS36)		62	3-704-495-01	SPACER, DY (KV-32TS46/32TS36)	
51	X-4031-029-1	GRILLE ASSY, SPEAKER (KV-27TS36/27TS32/27TS29)		63	$\Delta$ .1-451-315-41	DEFLECTION YOKE (Y34FXA) (KV-32TS46/32TS36)	
52	X-4031-039-1	BEZNET ASSY (KV-27TS36)	53	63	$\Delta$ .1-451-275-41	DEFLECTION YOKE (Y34FXA) (KV-27TS36/27TS32/27TS29)	
52	X-4031-038-2	BEZNET ASSY (KV-27TS32)	53	64	*A-1331-264-A	C BOARD, COMPLETE	
52	X-4031-026-1	BEZNET ASSY (KV-27TS29)	53	65	4-036-329-01	SPRING (B), TENSION (KV-27TS36/27TS32/27TS29)	
52	X-4031-019-1	BEZNET ASSY (KV-32TS36)	53	66	$\Delta$ .1-402-952-11	COIL, DEMAGNETIZATION (KV-32TS46/32TS36)	
52	X-4031-019-2	BEZNET ASSY (KV-32TS46)	53	67	*4-371-629-01	STOPPER, WIRE (KV-32TS46/32TS36)	
53	4-039-462-01	DOOR, CONTROL (KV-32TS36/27TS36)		68	4-033-681-01	HOLDER, LEAD (KV-32TS46/32TS36)	
53	4-039-462-11	DOOR, CONTROL (KV-27TS32)		69	4-387-204-01	NUT, SPECIAL, PICTURE TUBE (KV-32TS46/32TS36)	
53	4-039-459-01	PANEL (KV-27TS29)		70	1-406-726-11	COIL, DEGAUSSING (KV-27TS36/27TS32/27TS29)	
53	4-039-462-21	DOOR, CONTROL (KV-32TS46)		71	4-040-388-01	HOLDER(S), DGC (KV-27TS36/27TS32/27TS29)	
54	1-544-549-11	SPEAKER		72	4-040-537-01	HOLDER(A), DGC (KV-27TS36/27TS32/27TS29)	
55	4-388-477-01	SCREW(3X16), TAPPING, +BV WASHER		73	4-040-387-01	HOLDER(M), DGC (KV-27TS36/27TS32/27TS29)	
56	*4-031-428-01	SUPPORT (RIGHT) (PICTURE TUBE) (KV-32TS46/32TS36)		74	4-308-870-00	CLIP, LEAD WIRE	
57	*4-031-430-01	SUPPRT (LEFT) (PICTURE TUBE) (KV-32TS46/32TS36)		75	1-452-032-00	MAGNET, DISK	
58	4-031-429-01	BRACKET, PICTURE TUBE		76	1-452-094-00	MAGNET, ROTATABLE; 15MM $\phi$	
59	$\Delta$ .8-733-723-05	PICTURE TUBE (A80JYV50X) (KV-32TS46/32TS36)		77	X-4306-312-0	PERMALLOY ASSY, CONVERGENCE	
59	$\Delta$ .8-733-838-05	PICTURE TUBE (A68KZJ50X) (KV-27TS36/27TS32/27TS29)					
60	4-390-505-01	SCREW(7), TAPPING (KV-27TS36/27TS32/27TS29)					
61	*3-704-372-01	HOLDER, HV CABLE (KV-27TS36/27TS32/27TS29)					



### 7-3. SPEAKER (KV-32TS46 (US/CND))



The components identified by shading and mark **▲** are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque **▲** sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	RE MARK
101	9-904-749-01	VOLUME NOB		102	108	9-900-278-01	SPEAKER
102	9-904-748-01	FELT WASHER		109	9-904-754-01	AMP KIT (TWY1019-A)	
103	9-904-745-01	FRONT CASE	104	110	▲ 9-904-752-01	FUSE	
104	9-904-747-01	ENCLOSURE SEALANT TUBE		111	9-904-744-01	CABINET	112
105	▲ 9-904-751-01	TRANSFORMER, POWER		112	9-904-746-01	ENCLOSURE SEALANT PACKING	
106	▲ 9-904-750-01	CORD, POWER		113	4-040-527-01	FOOT	
107	▲ 9-904-753-01	AC OUTLET					



KV-27TS29/27TS32/27TS36

RM-Y116 RM-Y117 RM-Y118

KV-32TS36/32TS46

RM-Y118 RM-Y118  
SA-W200

## SECTION 8

## ELECTRICAL PARTS LIST

P

## NOTE:

The components identified by shading and mark  $\Delta$  are critical for safety.  
Replace only with part number specified.

Les composants identifiés par une trame et une marque  $\Delta$  sont critiques pour la sécurité.  
Ne les remplacer que par une pièce portant le numéro spécifié.

• Items marked "\*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

• All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

## RESISTORS

• All resistors are in ohms  
• F: nonflammable

When indicating parts by reference number, please include the board name.

## CAPACITORS

MF:  $\mu$ F, PF:  $\mu$ F

## COILS

MMH: mH, UH:  $\mu$ H

• The components identified by  $\boxtimes$  in this manual have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation.

Should replacement be required, replace only with the value originally used.

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
*A-1195-062-A P BOARD, COMPLETE (KV-32TS36/32TS46 /27TS36)				C3249	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
<CAPACITOR>				C3250	1-163-113-00	CERAMIC CHIP 68PF	5% 50V
C3201	1-124-477-11	ELECT 47MF	20% 16V	C3251	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C3203	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C3252	1-163-103-00	CERAMIC CHIP 27PF	5% 50V
C3204	1-124-907-11	ELECT 10MF	20% 50V	C3253	1-163-101-00	CERAMIC CHIP 22PF	5% 50V
C3205	1-124-907-11	ELECT 10MF	20% 50V	C3254	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V
C3206	1-124-907-11	ELECT 10MF	20% 50V	C3255	1-163-101-00	CERAMIC CHIP 22PF	5% 50V
C3207	1-163-117-00	CERAMIC CHIP 100PF	5% 50V	C3256	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C3208	1-163-117-00	CERAMIC CHIP 100PF	5% 50V	C3257	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
C3209	1-123-382-00	ELECT 3.3MF	20% 50V	C3258	1-163-113-00	CERAMIC CHIP 68PF	5% 50V
C3210	1-124-477-11	ELECT 47MF	20% 16V	C3259	1-163-111-00	CERAMIC CHIP 56PF	5% 50V
C3212	1-123-382-00	ELECT 3.3MF	20% 50V	C3260	1-163-119-00	CERAMIC CHIP 120PF	5% 50V
C3213	1-164-346-11	CERAMIC CHIP 1MF	16V	C3261	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V
C3214	1-164-346-11	CERAMIC CHIP 1MF	16V	C3263	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V
C3215	1-164-346-11	CERAMIC CHIP 1MF	16V	C3264	1-165-319-11	CERAMIC CHIP 0.1MF	50V
C3216	1-164-005-11	CERAMIC CHIP 0.47MF	25V	C3265	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V
C3217	1-164-346-11	CERAMIC CHIP 1MF	16V	C3266	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V
C3218	1-164-346-11	CERAMIC CHIP 1MF	16V	C3267	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V
C3219	1-126-103-11	ELECT 470MF	20% 16V	C3268	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V
C3220	1-164-346-11	CERAMIC CHIP 1MF	16V	C3269	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V
C3221	1-164-346-11	CERAMIC CHIP 1MF	16V	C3270	1-165-319-11	CERAMIC CHIP 0.1MF	50V
C3222	1-164-336-11	CERAMIC CHIP 0.33MF	25V	C3271	1-165-319-11	CERAMIC CHIP 0.1MF	50V
C3223	1-164-336-11	CERAMIC CHIP 0.33MF	25V	C3272	1-165-319-11	CERAMIC CHIP 0.1MF	50V
C3224	1-164-222-11	CERAMIC CHIP 0.22MF	25V	C3273	1-163-109-00	CERAMIC CHIP 47PF	5% 50V
C3225	1-164-222-11	CERAMIC CHIP 0.22MF	25V	C3274	1-163-101-00	CERAMIC CHIP 22PF	5% 50V
C3226	1-164-005-11	CERAMIC CHIP 0.47MF	25V	C3275	1-163-101-00	CERAMIC CHIP 22PF	5% 50V
C3227	1-164-346-11	CERAMIC CHIP 1MF	16V	C3276	1-163-111-00	CERAMIC CHIP 56PF	5% 50V
C3228	1-163-117-00	CERAMIC CHIP 100PF	5% 50V	C3277	1-163-101-00	CERAMIC CHIP 22PF	5% 50V
C3229	1-163-093-00	CERAMIC CHIP 10PF	5% 50V	C3278	1-163-101-00	CERAMIC CHIP 22PF	5% 50V
C3230	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V	C3279	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V
C3231	1-163-125-00	CERAMIC CHIP 220PF	5% 50V	C3280	1-124-907-11	ELECT 10MF	20% 50V
C3232	1-163-117-00	CERAMIC CHIP 100PF	5% 50V	C3282	1-164-346-11	CERAMIC CHIP 1MF	16V
C3233	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	<CONNECTOR>			
C3234	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	CN150	1-573-297-11	CONNECTOR, BOARD TO BOARD 18P	
C3235	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	<DIODE>			
C3236	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	D3202	8-719-031-68	DIODE HVU359-TRU	
C3237	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	D3203	8-719-404-46	DIODE MA110	
C3238	1-163-101-00	CERAMIC CHIP 22PF	5% 50V	D3208	8-719-110-17	DIODE RD10ESB2	
C3239	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V	D3209	8-719-110-17	DIODE RD10ESB2	
C3240	1-163-101-00	CERAMIC CHIP 22PF	5% 50V	<IC>			
C3241	1-163-103-00	CERAMIC CHIP 27PF	5% 50V	IC3200	8-759-517-74	IC MB81461-12-PSZ-G-BF2	
C3242	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	IC3201	8-759-093-29	IC MB86144	
C3243	1-163-117-00	CERAMIC CHIP 100PF	5% 50V	IC3202	8-759-093-28	IC MB40176PF-EF	
C3244	1-163-113-00	CERAMIC CHIP 68PF	5% 50V	IC3203	8-759-093-28	IC MB40176PF-EF	
C3245	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	IC3204	8-759-093-26	IC MB3512PF-EF	
C3246	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V				
C3247	1-163-033-00	CERAMIC CHIP 0.022MF	50V				
C3248	1-163-125-00	CERAMIC CHIP 220PF	5% 50V				



KV-27TS29/27TS32/27TS36

RM-Y118 RM-Y117 RM-Y111

KV-32TS36/32TS46

RM-Y118 RM-Y118  
SA-W200

P A

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
IC3205	8-759-243-19	IC TC7SU04F		R3238	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
	<COIL>			R3239	1-216-043-00	METAL GLAZE 560 5% 1/10W	
L3201	1-410-470-11	INDUCTOR 10UH		R3241	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
L3202	1-408-424-00	INDUCTOR 180UH		R3242	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
L3203	1-408-424-00	INDUCTOR 180UH		R3243	1-216-025-00	METAL GLAZE 100 5% 1/10W	
L3204	1-410-476-11	INDUCTOR 33UH		R3244	1-216-025-00	METAL GLAZE 100 5% 1/10W	
L3205	1-410-470-11	INDUCTOR 10UH		R3245	1-216-025-00	METAL GLAZE 100 5% 1/10W	
L3206	1-410-387-11	INDUCTOR 33UH		R3246	1-216-069-00	METAL GLAZE 6.8K 5% 1/10W	
L3207	1-410-387-11	INDUCTOR 33UH		R3247	1-216-063-00	METAL GLAZE 3.9K 5% 1/10W	
L3208	1-410-387-11	INDUCTOR 33UH		R3248	1-216-295-00	METAL GLAZE 0 5% 1/10W	
L3209	1-410-387-11	INDUCTOR 33UH		R3249	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
	<TRANSISTOR>			R3250	1-216-043-00	METAL GLAZE 560 5% 1/10W	
Q3201	8-729-422-36	TRANSISTOR 2SB709A-Q		R3251	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
Q3202	8-729-422-27	TRANSISTOR 2SD601A-Q		R3252	1-216-043-00	METAL GLAZE 560 5% 1/10W	
Q3203	8-729-422-36	TRANSISTOR 2SB709A-Q		R3253	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
Q3204	8-729-422-36	TRANSISTOR 2SB709A-Q		R3254	1-216-043-00	METAL GLAZE 560 5% 1/10W	
Q3206	8-729-422-27	TRANSISTOR 2SD601A-Q		R3255	1-216-041-00	METAL GLAZE 470 5% 1/10W	
Q3207	8-729-422-36	TRANSISTOR 2SB709A-Q		R3256	1-216-043-00	METAL GLAZE 560 5% 1/10W	
Q3208	8-729-422-27	TRANSISTOR 2SD601A-Q		R3259	1-216-298-00	METAL GLAZE 2.2 5% 1/10W	
Q3209	8-729-422-36	TRANSISTOR 2SB709A-Q		R3260	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
Q3210	8-729-422-36	TRANSISTOR 2SB709A-Q		R3263	1-216-025-00	METAL GLAZE 100 5% 1/10W	
	<RESISTOR>			R3264	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R3201	1-216-097-00	METAL GLAZE 100K 5% 1/10W		R3265	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R3202	1-216-073-00	METAL GLAZE 10K 5% 1/10W		R3266	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R3203	1-216-025-00	METAL GLAZE 100 5% 1/10W		R3267	1-216-055-00	METAL GLAZE 1.8K 5% 1/10W	
R3204	1-216-025-00	METAL GLAZE 100 5% 1/10W		R3268	1-216-053-00	METAL GLAZE 1.5K 5% 1/10W	
R3205	1-216-121-00	METAL GLAZE 1M 5% 1/10W		R3269	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R3207	1-216-295-00	METAL GLAZE 0 5% 1/10W		R3270	1-216-657-11	METAL CHIP 1.8K 0.50% 1/10W	
R3208	1-216-097-00	METAL GLAZE 100K 5% 1/10W		R3271	1-216-655-11	METAL CHIP 1.5K 0.50% 1/10W	
R3209	1-216-079-00	METAL GLAZE 18K 5% 1/10W		R3273	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R3210	1-216-089-00	METAL GLAZE 47K 5% 1/10W		R3274	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R3211	1-216-073-00	METAL GLAZE 10K 5% 1/10W		R3275	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R3212	1-216-073-00	METAL GLAZE 10K 5% 1/10W		R3276	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R3213	1-216-075-00	METAL GLAZE 12K 5% 1/10W		R3277	1-216-298-00	METAL GLAZE 2.2 5% 1/10W	
R3214	1-216-121-00	METAL GLAZE 1M 5% 1/10W			<CRYSTAL>		
R3215	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W		X3201	1-567-878-11	VIBRATOR, CRYSTAL	
R3216	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W		X3202	1-567-878-11	VIBRATOR, CRYSTAL	
R3217	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W			*****		
R3218	1-216-049-00	METAL GLAZE 1K 5% 1/10W		*A-1297-065-A	A BOARD, COMPLETE (KV-32TS36/27TS32/27TS29)		
R3219	1-216-049-00	METAL GLAZE 1K 5% 1/10W			*****		
R3220	1-216-049-00	METAL GLAZE 1K 5% 1/10W		*A-1297-112-A	A BOARD, COMPLETE (KV-32TS46)		
R3221	1-216-655-11	METAL CHIP 1.5K 0.50% 1/10W			*****		
R3222	1-216-655-11	METAL CHIP 1.5K 0.50% 1/10W			<CAPACITOR>		
R3223	1-216-025-00	METAL GLAZE 100 5% 1/10W		C171	1-124-907-11	ELECT 10MF 20% 50V (KV-32TS46)	
R3224	1-216-049-00	METAL GLAZE 1K 5% 1/10W		C173	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
R3225	1-216-025-00	METAL GLAZE 100 5% 1/10W		C174	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
R3226	1-216-085-00	METAL GLAZE 33K 5% 1/10W		C175	1-126-103-11	ELECT 470MF 20% 16V	
R3227	1-216-647-11	METAL CHIP 680 0.50% 1/10W		C176	1-126-103-11	ELECT 470MF 20% 16V	
R3228	1-216-045-00	METAL GLAZE 680 5% 1/10W		C177	1-124-907-11	ELECT 10MF 20% 50V	
R3229	1-216-073-00	METAL GLAZE 10K 5% 1/10W		C178	1-126-101-11	ELECT 100MF 20% 16V	
R3230	1-216-073-00	METAL GLAZE 10K 5% 1/10W		C179	1-124-916-11	ELECT 22MF 20% 25V	
R3231	1-216-001-00	METAL GLAZE 10 5% 1/10W		C180	1-124-916-11	ELECT 22MF 20% 25V (KV-32TS46)	
R3232	1-216-083-00	METAL GLAZE 27K 5% 1/10W		C181	1-164-161-11	CERAMIC CHIP 0.0022MF 10% 50V	
R3233	1-216-049-00	METAL GLAZE 1K 5% 1/10W		C182	1-164-161-11	CERAMIC CHIP 0.0022MF 10% 50V (KV-32TS46)	
R3234	1-216-651-11	METAL CHIP 1K 0.50% 1/10W		C184	1-124-907-11	ELECT 10MF 20% 50V (KV-32TS46)	
R3235	1-216-043-00	METAL GLAZE 560 5% 1/10W					
R3236	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W					
R3237	1-216-043-00	METAL GLAZE 560 5% 1/10W					



## V-27TS29/27TS32/27TS36

RM-Y116 RM-Y117 RM-Y118

## V-32TS36/32TS46

RM-Y118 RM-Y118  
SA-W200

Les composants identifiés par une  
trame et une marque  $\Delta$  sont  
critiques pour la sécurité.  
Ne les remplacer que par une pièce  
portant le numéro spécifié.

The components identified by  
shading and mark  $\Delta$  are critical  
for safety.  
Replace only with part number  
specified.

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
<CONNECTOR>				*****			
CN103	*1-564-519-11	PLUG, CONNECTOR 4P		*A-1306-427-A	M BOARD, COMPLETE		
CN151	*1-573-979-11	CONNECTOR, BOARD TO BOARD 11P			(KV-32TS36(US)/27TS36(US)/27TS32/27TS29(US))		
CN152	1-750-394-11	PIN, CONNECTOR (STAKING) 32P		*A-1306-432-A	M BOARD, COMPLETE		
CN164	*1-564-505-11	PLUG, CONNECTOR 2P			(KV-32TS36(CND)/27TS36(CND)/27TS29(CND))		
CN165	*1-564-505-11	PLUG, CONNECTOR 2P		*A-1306-433-A	M BOARD, COMPLETE (KV-32TS46(CND))		
<DIODE>					(KV-32TS46(US))		
D170	8-719-110-78	DIODE RD33ESB2		*A-1306-434-A	M BOARD, COMPLETE (KV-32TS46(US))		
D175	8-719-110-76	DIODE RD33ESB1	(KV-32TS46)		*****		
<IC>				<CAPACITOR>			
IC172	8-759-932-67	IC BU4053BF	(KV-32TS46)	C002	1-163-809-11	CERAMIC CHIP 0.047MF	10% 25V
<COIL>				C003	1-163-001-11	CERAMIC CHIP 220PF	10% 50V
L170	1-408-408-00	INDUCTOR 8.2UH		C005	1-163-125-00	CERAMIC CHIP 220PF	5% 50V
L171	1-408-408-00	INDUCTOR 8.2UH		C006	1-163-125-00	CERAMIC CHIP 220PF	5% 50V
L172	1-408-408-00	INDUCTOR 8.2UH		C007	1-124-903-11	ELECT 1MF	20% 50V
L173	1-408-408-00	INDUCTOR 8.2UH	(KV-32TS46)	C008	1-163-125-00	CERAMIC CHIP 220PF	5% 50V
<TRANSISTOR>				C009	1-163-125-00	CERAMIC CHIP 220PF	5% 50V
Q172	8-729-422-36	TRANSISTOR 2SB709A-Q	(KV-32TS46)	C010	1-163-125-00	CERAMIC CHIP 220PF	5% 50V
Q173	8-729-422-36	TRANSISTOR 2SB709A-Q	(KV-32TS46)	C012	1-163-125-00	CERAMIC CHIP 220PF	5% 50V
<RESISTOR>				C013	1-163-125-00	CERAMIC CHIP 220PF	5% 50V
R170	1-216-025-00	METAL GLAZE 100 5% 1/10W		C014	1-163-125-00	CERAMIC CHIP 220PF	5% 50V
		(KV-32TS36/27TS36/27TS32/27TS29)		C015	1-163-125-00	CERAMIC CHIP 220PF	5% 50V
R173	1-216-295-00	METAL GLAZE 0 5% 1/10W		C016	1-163-125-00	CERAMIC CHIP 220PF	5% 50V
		(KV-32TS46)		C017	1-163-125-00	CERAMIC CHIP 220PF	5% 50V
R174	1-216-689-11	METAL GLAZE 39K 5% 1/10W		C018	1-163-125-00	CERAMIC CHIP 220PF	5% 50V
R175	1-215-900-11	METAL OXIDE 22K 5% 2W F		C019	1-163-125-00	CERAMIC CHIP 220PF	5% 50V
		(KV-32TS46)		C021	1-163-125-00	CERAMIC CHIP 220PF	5% 50V
R176	1-216-295-00	METAL GLAZE 0 5% 1/10W		C022	1-163-125-00	CERAMIC CHIP 220PF	5% 50V
		(KV-32TS36/27TS36/27TS32/27TS29)		C023	1-163-125-00	CERAMIC CHIP 220PF	5% 50V
R177	1-215-900-11	METAL OXIDE 22K 5% 2W F		C025	1-163-125-00	CERAMIC CHIP 220PF	5% 50V
		(KV-32TS46)		C028	1-163-125-00	CERAMIC CHIP 220PF	5% 50V
R179	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W		C029	1-163-125-00	CERAMIC CHIP 220PF	5% 50V
R181	1-216-025-00	METAL GLAZE 100 5% 1/10W		C034	1-163-125-00	CERAMIC CHIP 220PF	5% 50V
		(KV-32TS46)		C035	1-163-125-00	CERAMIC CHIP 220PF	5% 50V
R185	1-216-025-00	METAL GLAZE 100 5% 1/10W		C041	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V
		(KV-32TS46)		C043	1-163-159-00	CERAMIC CHIP 12PF	2% 50V
R187	1-216-083-00	METAL GLAZE 27K 5% 1/10W		C045	1-124-119-00	ELECT 330MF	20% 16V
R188	1-216-689-11	METAL GLAZE 39K 5% 1/10W		C047	1-104-896-91	CERAMIC CHIP 24PF	2% 50V
		(KV-32TS46)		C049	1-163-125-00	CERAMIC CHIP 220PF	5% 50V
R189	1-216-083-00	METAL GLAZE 27K 5% 1/10W		C050	1-163-125-00	CERAMIC CHIP 220PF	5% 50V
		(KV-32TS46)		C051	1-163-031-11	CERAMIC CHIP 0.01MF	5% 50V
R190	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W		C052	1-163-125-00	CERAMIC CHIP 220PF	5% 50V
		(KV-32TS46)		C053	1-163-121-00	CERAMIC CHIP 150PF	5% 50V
R191	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W		C054	1-163-125-00	CERAMIC CHIP 220PF	5% 50V
		(KV-32TS46)		C055	1-163-125-00	CERAMIC CHIP 220PF	5% 50V
R193	1-216-037-00	METAL GLAZE 330 5% 1/10W		C056	1-163-125-00	CERAMIC CHIP 220PF	5% 50V
		(KV-32TS46)		C057	1-163-017-00	CERAMIC CHIP 0.0047MF	10% 50V
R196	1-216-037-00	METAL GLAZE 330 5% 1/10W		C058	1-163-037-11	CERAMIC CHIP 0.022MF	10% 25V
		(KV-32TS46)		C059	1-163-125-00	CERAMIC CHIP 220PF	5% 50V
<TUNER>				C060	1-124-903-11	ELECT 1MF	20% 50V
TU101A	8-598-039-00	TUNER BTF-WA401		C061	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
TU102A	8-598-047-00	TUNER BTF-WA401	(KV-32TS46)	C062	1-124-907-11	ELECT 10MF	20% 50V
				C150	1-136-165-00	FILM 0.1MF	5% 50V
						(KV-32TS46(US)/32TS36(US))	
				C151	1-136-175-00	FILM 0.068MF	5% 50V
						(KV-32TS46(US)/32TS36(US))	



M

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
C152	1-124-907-11	ELECT	10MF 20% 50V (KV-32TS46(US)/32TS36(US))	<CONNECTOR>			
C153	1-137-367-11	FILM	0.0033MF 5% 50V (KV-32TS46(US)/32TS36(US))	CN129	*1-564-523-11	PLUG, CONNECTOR 8P	
C154	1-163-038-00	CERAMIC CHIP	0.1MF 25V (KV-32TS46(US)/32TS36(US))	CN130	1-573-301-11	CONNECTOR, BOARD TO BOARD 20P	
C155	1-124-907-11	ELECT	10MF 20% 50V (KV-32TS46(US)/32TS36(US))	CN131	*1-691-632-11	CONNECTOR, BOARD TO BOARD 15P	
C156	1-163-135-00	CERAMIC CHIP	560PF 5% 50V (KV-32TS46(US)/32TS36(US))	CN134	*1-564-521-11	PLUG, CONNECTOR 6P	(KV-32TS46)
C157	1-163-038-00	CERAMIC CHIP	0.1MF 25V (KV-32TS46(US)/32TS36(US))	CN137	1-750-394-11	PIN, CONNECTOR (STAKING) 32P	
C158	1-124-903-11	ELECT	1MF 20% 50V (KV-32TS46(US)/32TS36(US))	CN138	*1-564-511-31	PLUG, CONNECTOR 8P	
C160	1-124-903-11	ELECT	1MF 20% 50V	CN168	*1-564-505-11	PLUG, CONNECTOR 2P	
C201	1-163-017-00	CERAMIC CHIP	0.0047MF 10% 50V	<DIODE>			
C202	1-163-125-00	CERAMIC CHIP	220PF 5% 50V	D001	8-719-404-46	DIODE MA110	
C203	1-163-989-11	CERAMIC CHIP	0.033MF 10% 25V	D002	8-719-404-46	DIODE MA110	(KV-32TS46(US))
C204	1-126-101-11	ELECT	100MF 20% 16V	D004	8-719-404-46	DIODE MA110	
C205	1-163-125-00	CERAMIC CHIP	220PF 5% 50V	D005	8-713-300-57	DIODE 1T33	
C211	1-163-989-11	CERAMIC CHIP	0.033MF 10% 25V	D006	8-719-110-17	DIODE RD10ESB2	
C212	1-124-902-00	ELECT	0.47MF 20% 50V	D007	8-719-110-17	DIODE RD10ESB2	
C213	1-124-902-00	ELECT	0.47MF 20% 50V	D008	8-719-110-17	DIODE RD10ESB2	
C214	1-163-017-00	CERAMIC CHIP	0.0047MF 10% 50V	D009	8-719-110-17	DIODE RD10ESB2	
C216	1-124-478-11	ELECT	100MF 20% 25V	D150	8-719-404-46	DIODE MA110 (KV-32TS46(US)/32TS36(US))	
C301	1-163-117-00	CERAMIC CHIP	100PF 5% 50V	D201	8-719-404-46	DIODE MA110	
C305	1-124-907-11	ELECT	10MF 20% 50V	D202	8-719-404-46	DIODE MA110	
C306	1-124-902-00	ELECT	0.47MF 20% 50V	D205	8-719-110-17	DIODE RD10ESB2	
C307	1-163-125-00	CERAMIC CHIP	220PF 5% 50V	D206	8-719-110-17	DIODE RD10ESB2	
C308	1-163-099-00	CERAMIC CHIP	18PF 5% 50V	D301	8-719-110-17	DIODE RD10ESB2	
C310	1-124-916-11	ELECT	22MF 20% 25V	D304	8-719-110-17	DIODE RD10ESB2	
C311	1-124-903-11	ELECT	1MF 20% 50V	<IC>			
C313	1-163-003-11	CERAMIC CHIP	330PF 10% 50V	IC101	8-752-841-16	IC CXP80424-SV4397	
C315	1-124-907-11	ELECT	10MF 20% 50V (KV-32TS46(US))	IC102	8-759-057-38	IC 24C02A1/P	
C316	1-124-907-11	ELECT	10MF 20% 50V (KV-32TS46(US))	IC150	8-759-084-09	IC Z8612812PSC	(KV-32TS46(US)/32TS36(US))
C317	1-124-907-11	ELECT	10MF 20% 50V (KV-32TS46(US))	IC201	8-759-090-21	IC TDA8424	
C318	1-136-165-00	FILM	0.1MF 5% 50V	IC202	8-759-983-69	IC UPC358PS	
C319	1-136-165-00	FILM	0.1MF 5% 50V	IC301	8-752-059-67	IC CXA1465AS	
C320	1-136-165-00	FILM	0.1MF 5% 50V	<JUMPER RESISTOR>			
C321	1-124-360-00	ELECT	1000MF 20% 16V	JR200	1-216-295-00	METAL GLAZE 0 5% 1/10W	
C322	1-136-153-00	FILM	0.01MF 5% 50V	<COIL>			
C323	1-126-176-11	ELECT	220MF 20% 10V	L001	1-410-470-11	INDUCTOR 10UH	
C324	1-163-003-11	CERAMIC CHIP	330PF 10% 50V	L002	1-408-414-00	INDUCTOR 27UH	
C325	1-163-037-11	CERAMIC CHIP	0.022MF 10% 25V	L150	1-410-470-11	INDUCTOR 10UH	(KV-32TS46(US)/32TS36(US))
C326	1-136-169-00	FILM	0.22MF 5% 50V	<TRANSISTOR>			
C327	1-136-169-00	FILM	0.22MF 5% 50V	Q001	8-729-422-36	TRANSISTOR 2SB709A-Q	
C328	1-124-902-00	ELECT	0.47MF 20% 50V	Q002	8-729-422-36	TRANSISTOR 2SB709A-Q	
C329	1-124-903-11	ELECT	1MF 20% 50V	Q004	8-729-422-36	TRANSISTOR 2SB709A-Q	
C330	1-124-907-11	ELECT	10MF 20% 50V	Q005	8-729-422-27	TRANSISTOR 2SD601A-Q	
C331	1-124-907-11	ELECT	10MF 20% 50V	Q151	8-729-422-27	TRANSISTOR 2SD601A-Q	(KV-32TS46(US)/32TS36(US))
C332	1-164-489-11	CERAMIC CHIP	0.22MF 10% 16V	Q201	8-729-422-27	TRANSISTOR 2SD601A-Q	
C333	1-163-011-11	CERAMIC CHIP	0.0015MF 10% 50V	Q301	8-729-422-36	TRANSISTOR 2SB709A-Q	
C334	1-124-902-00	ELECT	0.47MF 20% 50V	Q302	8-729-422-36	TRANSISTOR 2SB709A-Q	
C335	1-163-001-11	CERAMIC CHIP	220PF 10% 50V	Q307	8-729-422-27	TRANSISTOR 2SD601A-Q	
C336	1-124-903-11	ELECT	1MF 20% 50V	Q308	8-729-422-27	TRANSISTOR 2SD601A-Q	
C337	1-124-902-00	ELECT	0.47MF 20% 50V				
C338	1-136-153-00	FILM	0.01MF 5% 50V				
C340	1-124-903-11	ELECT	1MF 20% 50V				
C341	1-163-005-11	CERAMIC CHIP	470PF 10% 50V				
C342	1-137-414-91	FILM	0.0047MF 10% 100V				



V-27TS29/27TS32/27TS36

RM-Y116 RM-Y117 RM-Y118

V-32TS36/32TS46

RM-Y118 RM-Y118  
SA-W200

M

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
<RESISTOR>				R074	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R002	1-216-073-00	METAL GLAZE 10K 5% 1/10W		R075	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R003	1-216-033-00	METAL GLAZE 220 5% 1/10W		R076	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R004	1-216-033-00	METAL GLAZE 220 5% 1/10W		R078	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R005	1-216-033-00	METAL GLAZE 220 5% 1/10W		R079	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R006	1-216-049-00	METAL GLAZE 1K 5% 1/10W		R080	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R007	1-216-033-00	METAL GLAZE 220 5% 1/10W		R082	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R008	1-216-033-00	METAL GLAZE 220 5% 1/10W		R083	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R009	1-216-033-00	METAL GLAZE 220 5% 1/10W		R086	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R011	1-216-033-00	METAL GLAZE 220 5% 1/10W		R087	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R012	1-216-033-00	METAL GLAZE 220 5% 1/10W		R089	1-216-083-00	METAL GLAZE 27K 5% 1/10W	
R013	1-216-033-00	METAL GLAZE 220 5% 1/10W		R090	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R016	1-216-033-00	METAL GLAZE 220 5% 1/10W		R091	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R017	1-216-033-00	METAL GLAZE 220 5% 1/10W		R092	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R018	1-216-033-00	METAL GLAZE 220 5% 1/10W		R093	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R019	1-216-033-00	METAL GLAZE 220 5% 1/10W		R150	1-216-097-00	METAL GLAZE 100K 5% 1/10W (KV-32TS46(US)/32TS36(US))	
R020	1-216-033-00	METAL GLAZE 220 5% 1/10W		R151	1-216-049-00	METAL GLAZE 1K 5% 1/10W (KV-32TS46(US)/32TS36(US))	
RC21	1-216-073-00	METAL GLAZE 10K 5% 1/10W		R152	1-216-049-00	METAL GLAZE 1K 5% 1/10W (KV-32TS46(US)/32TS36(US))	
R022	1-216-073-00	METAL GLAZE 10K 5% 1/10W		R153	1-216-069-00	METAL GLAZE 6.8K 5% 1/10W (KV-32TS46(US)/32TS36(US))	
R023	1-216-033-00	METAL GLAZE 220 5% 1/10W		R154	1-216-041-00	METAL GLAZE 470 5% 1/10W (KV-32TS46(US)/32TS36(US))	
R025	1-216-033-00	METAL GLAZE 220 5% 1/10W		R155	1-216-049-00	METAL GLAZE 1K 5% 1/10W (KV-32TS46(US)/32TS36(US))	
R026	1-216-097-00	METAL GLAZE 100K 5% 1/10W		R156	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R027	1-216-121-00	METAL GLAZE 1M 5% 1/10W		R157	1-216-073-00	METAL GLAZE 10K 5% 1/10W (KV-32TS46(US)/32TS36(US))	
R028	1-216-073-00	METAL GLAZE 10K 5% 1/10W		R158	1-216-073-00	METAL GLAZE 10K 5% 1/10W (KV-32TS46(US)/32TS36(US))	
R029	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W		R159	1-216-049-00	METAL GLAZE 1K 5% 1/10W (KV-32TS46(US)/32TS36(US))	
R030	1-216-073-00	METAL GLAZE 10K 5% 1/10W		R160	1-216-049-00	METAL GLAZE 1K 5% 1/10W (KV-32TS46(US)/32TS36(US))	
R031	1-216-033-00	METAL GLAZE 220 5% 1/10W		R161	1-216-049-00	METAL GLAZE 1K 5% 1/10W (KV-32TS46(US)/32TS36(US))	
R032	1-216-033-00	METAL GLAZE 220 5% 1/10W		R162	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W (KV-32TS46(US)/32TS36(US))	
R033	1-216-033-00	METAL GLAZE 220 5% 1/10W		R163	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W (KV-32TS46(US)/32TS36(US))	
R034	1-216-033-00	METAL GLAZE 220 5% 1/10W		R164	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W (KV-32TS46(US)/32TS36(US))	
R035	1-216-033-00	METAL GLAZE 220 5% 1/10W		R165	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W (KV-32TS46(US)/32TS36(US))	
R036	1-216-033-00	METAL GLAZE 220 5% 1/10W		R166	1-216-049-00	METAL GLAZE 1K 5% 1/10W (KV-32TS46(US)/32TS36(US))	
R037	1-216-033-00	METAL GLAZE 220 5% 1/10W		R168	1-216-049-00	METAL GLAZE 1K 5% 1/10W (KV-32TS46(US)/32TS36(US))	
R038	1-216-033-00	METAL GLAZE 220 5% 1/10W		R201	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R039	1-216-295-00	METAL GLAZE 0 5% 1/10W		R202	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R040	1-216-049-00	METAL GLAZE 1K 5% 1/10W		R203	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R041	1-216-033-00	METAL GLAZE 220 5% 1/10W		R204	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R042	1-216-049-00	METAL GLAZE 1K 5% 1/10W		R205	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R043	1-216-049-00	METAL GLAZE 1K 5% 1/10W		R206	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R044	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W		R207	1-216-085-00	METAL GLAZE 33K 5% 1/10W	
R045	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W		R208	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R046	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W		R209	1-216-085-00	METAL GLAZE 33K 5% 1/10W	
R047	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W		R210	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R048	1-216-073-00	METAL GLAZE 10K 5% 1/10W		R211	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R049	1-216-049-00	METAL GLAZE 1K 5% 1/10W		R212	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R050	1-216-049-00	METAL GLAZE 1K 5% 1/10W		R213	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R051	1-216-073-00	METAL GLAZE 10K 5% 1/10W		R218	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R052	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W					
R053	1-216-049-00	METAL GLAZE 1K 5% 1/10W					
R054	1-216-049-00	METAL GLAZE 1K 5% 1/10W					
R055	1-216-033-00	METAL GLAZE 220 5% 1/10W (KV-32TS46)					
R058	1-216-073-00	METAL GLAZE 10K 5% 1/10W					
R059	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W					
R061	1-216-077-00	METAL GLAZE 15K 5% 1/10W					
R062	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W					
R063	1-216-033-00	METAL GLAZE 220 5% 1/10W (KV-32TS46)					
R064	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W					
R065	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W					
R066	1-216-025-00	METAL GLAZE 100 5% 1/10W					
R067	1-216-025-00	METAL GLAZE 100 5% 1/10W					
R069	1-216-033-00	METAL GLAZE 220 5% 1/10W (KV-32TS46)					



The components identified by shading and mark  $\Delta$  are critical for safety.  
Replace only with part number specified.

Les composants identifiés par une trame et une marque  $\Delta$  sont critiques pour la sécurité.  
Ne les remplacer que par une pièce portant le numéro spécifié.

**M** **C**

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
R219	1-216-073-00	METAL GLAZE	10K 5% 1/10W	C707	1-102-129-00	CERAMIC	0.01MF 10% 50V
R220	1-216-033-00	METAL GLAZE	220 5% 1/10W	C711	1-164-083-11	CERAMIC	680PF 10% 50V
R222	1-216-089-00	METAL GLAZE	47K 5% 1/10W	C712	1-164-081-11	CERAMIC	470PF 10% 50V
R223	1-216-045-00	METAL GLAZE	680 5% 1/10W	C731	1-164-083-11	CERAMIC	680PF 10% 50V
R301	1-216-025-00	METAL GLAZE	100 5% 1/10W	C732	1-164-081-11	CERAMIC	470PF 10% 50V
R302	1-216-049-00	METAL GLAZE	1K 5% 1/10W	C751	1-164-083-11	CERAMIC	680PF 10% 50V
R303	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	C752	1-164-083-11	CERAMIC	680PF 10% 50V
R306	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	<CONNECTOR>			
R312	1-216-119-00	METAL GLAZE	820K 5% 1/10W	CN701	1-695-915-11	TAB (CONTACT)	
R313	1-216-079-00	METAL GLAZE	18K 5% 1/10W	CN702	*1-508-768-00	PIN, CONNECTOR (5MM PITCH) 6P	
R321	1-216-041-00	METAL GLAZE	470 5% 1/10W	CN703	*1-564-511-11	PLUG, CONNECTOR 8P	
R323	1-216-041-00	METAL GLAZE	470 5% 1/10W	<DIODE>			
R324	1-216-041-00	METAL GLAZE	470 5% 1/10W	D711	8-719-911-19	DIODE 1SS119	
R327	1-216-653-11	METAL CHIP	1.2K 0.50% 1/10W	D712	8-719-911-19	DIODE 1SS119	
R328	1-216-033-00	METAL GLAZE	220 5% 1/10W	D731	8-719-911-19	DIODE 1SS119	
R329	1-216-033-00	METAL GLAZE	220 5% 1/10W	D732	8-719-911-19	DIODE 1SS119	
R330	1-216-295-00	METAL GLAZE	0 5% 1/10W	D751	8-719-911-19	DIODE 1SS119	
R331	1-216-678-11	METAL CHIP	13K 0.50% 1/10W	D752	8-719-911-19	DIODE 1SS119	
R332	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	D770	8-719-911-19	DIODE 1SS119	
R333	1-216-025-00	METAL GLAZE	100 5% 1/10W	D771	8-719-911-19	DIODE 1SS119	
R334	1-216-687-11	METAL CHIP	33K 0.50% 1/10W	D772	8-719-911-19	DIODE 1SS119	
R335	1-216-121-00	METAL GLAZE	1M 5% 1/10W	D773	8-719-911-19	DIODE 1SS119	
R336	1-216-295-00	METAL GLAZE	0 5% 1/10W	D777	8-719-109-68	DIODE RD3.6ESB1	
R337	1-216-049-00	METAL GLAZE	1K 5% 1/10W	D790	8-719-911-19	DIODE 1SS119	
R338	1-249-417-11	CARBON	1K 5% 1/4W F	D791	8-719-911-19	DIODE 1SS119	
R339	1-216-049-00	METAL GLAZE	1K 5% 1/10W	D792	8-719-911-19	DIODE 1SS119	
R340	1-216-077-00	METAL GLAZE	15K 5% 1/10W	D793	8-719-911-19	DIODE 1SS119	
R341	1-216-085-00	METAL GLAZE	33K 5% 1/10W	D794	8-719-911-19	DIODE 1SS119	
R342	1-216-295-00	METAL GLAZE	0 5% 1/10W	D795	8-719-911-19	DIODE 1SS119	
R343	1-216-053-00	METAL GLAZE	1.5K 5% 1/10W	<SOCKET>			
R344	1-216-043-00	METAL GLAZE	560 5% 1/10W	J701	$\Delta$ 1-540-071-13	SOCKET, PICTURE TUBE	
R345	1-216-109-00	METAL GLAZE	330K 5% 1/10W	<COIL>			
R346	1-216-071-00	METAL GLAZE	8.2K 5% 1/10W	L701	1-410-478-11	INDUCTOR	47UH
R347	1-249-409-91	CARBON	220 5% 1/4W F	<TRANSISTOR>			
R348	1-216-097-00	METAL GLAZE	100K 5% 1/10W	Q711	8-729-926-73	TRANSISTOR 2SC3271-N	
R349	1-216-089-00	METAL GLAZE	47K 5% 1/10W	Q712	8-729-119-78	TRANSISTOR 2SC2785-HFE	
R350	1-216-089-00	METAL GLAZE	47K 5% 1/10W	Q731	8-729-926-73	TRANSISTOR 2SC3271-N	
R351	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	Q732	8-729-119-78	TRANSISTOR 2SC2785-HFE	
R352	1-216-089-00	METAL GLAZE	47K 5% 1/10W	Q751	8-729-926-73	TRANSISTOR 2SC3271-N	
R353	1-216-089-00	METAL GLAZE	47K 5% 1/10W	Q752	8-729-119-78	TRANSISTOR 2SC2785-HFE	
R354	1-216-033-00	METAL GLAZE	220 5% 1/10W	Q770	8-729-119-76	TRANSISTOR 2SA1175-HFE	
R356	1-216-295-00	METAL GLAZE	0 5% 1/10W	Q771	8-729-200-17	TRANSISTOR 2SA1071-0	
R374	1-216-033-00	METAL GLAZE	220 5% 1/10W	Q772	8-729-200-17	TRANSISTOR 2SA1071-0	
R375	1-216-033-00	METAL GLAZE	220 5% 1/10W	Q773	8-729-200-17	TRANSISTOR 2SA1071-0	
<CRYSTAL>				Q790	8-729-119-78	TRANSISTOR 2SC2785-HFE	
X001	1-579-917-21	VIBRATOR, CRYSTAL		<RESISTOR>			
X001	1-579-917-41	VIBRATOR, CRYSTAL		R700	1-247-739-11	CARBON	100 5% 1/2W
X301	1-567-505-11	OSCILLATOR, CRYSTAL		R701	1-244-941-00	CARBON	680K 5% 1/2W
*****				R702	1-249-496-11	CARBON	100K 5% 1/2W
*A-1331-264-A C BOARD, COMPLETE				R703	1-249-496-11	CARBON	100K 5% 1/2W
*****				R704	1-216-398-11	METAL OXIDE	5.6 5% 3W
<CAPACITOR>							
C700	1-102-074-00	CERAMIC	0.001MF 10% 50V				
C701	1-162-114-00	CERAMIC	0.0047MF 2KV				
C702	1-106-375-12	MYLAR	0.022MF 99% 200V				
C703	1-106-375-12	MYLAR	0.022MF 99% 200V				
C704	1-162-116-00	CERAMIC	680PF 10% 2KV				
C705	1-123-946-00	ELECT	4.7MF 20% 250V				
C706	1-126-101-11	ELECT	100MF 20% 16V				







The components identified by shading and mark  $\Delta$  are critical for safety.  
Replace only with part number specified.

Les composants identifiés par une trame et une marque  $\Delta$  sont critiques pour la sécurité.  
Ne les remplacer que par une pièce portant le numéro spécifié.

KV-27TS29/27TS32/27TS36

RM-Y118 RM-Y117 RM-Y118

KV-32TS36/32TS46

RM-Y118 RM-Y118 SA-W200

E

D

REF. NO.	PART NO.	DESCRIPTION				REMARK
R1511	1-216-379-11	METAL OXIDE	6.8	5%	2W	F
R1513	1-249-423-11	CARBON	3.3K	5%	1/4W	
R1514	1-247-885-00	CARBON	180K	5%	1/4W	
R1515	1-215-905-11	METAL OXIDE	10	5%	3W	F
R1519	1-249-417-11	CARBON	1K	5%	1/4W	
R1520	1-249-417-11	CARBON	1K	5%	1/4W	
R1522	1-249-417-11	CARBON	1K	5%	1/4W	
R1527	1-249-417-11	CARBON	1K	5%	1/4W	F
R1528	1-249-438-11	CARBON	56K	5%	1/4W	
R1529	1-249-434-11	CARBON	27K	5%	1/4W	
R1530	1-249-432-11	CARBON	18K	5%	1/4W	
R1533	1-249-427-11	CARBON	6.8K	5%	1/4W	
R1534	1-249-424-11	CARBON	3.9K	5%	1/4W	
R1535	1-249-425-11	CARBON	4.7K	5%	1/4W	
R1536	1-215-857-11	METAL OXIDE	10	5%	1W	F
R1537	1-249-404-00	CARBON	82	5%	1/4W	
R1538	1-216-379-11	METAL OXIDE	6.8	5%	2W	F
R1541	1-249-441-11	CARBON	100K	5%	1/4W	
R1543	1-249-414-11	CARBON	560	5%	1/4W	
R1546	1-215-885-00	METAL OXIDE	68	5%	2W	F
R1552	1-249-426-11	CARBON	5.6K	5%	1/4W	
R1554	1-249-393-11	CARBON	10	5%	1/4W	
R1556	1-249-438-11	CARBON	56K	5%	1/4W	
R1559	1-249-429-11	CARBON	10K	5%	1/4W	
R1564	1-249-435-11	CARBON	33K	5%	1/4W	
R1568	1-247-891-00	CARBON	330K	5%	1/4W	
R1569	1-249-413-11	CARBON	470	5%	1/4W	
R1578	1-249-423-11	CARBON	3.3K	5%	1/4W	
R1582	1-249-411-11	CARBON	330	5%	1/4W	
R1583	1-249-421-11	CARBON	2.2K	5%	1/4W	
R1585	1-249-441-11	CARBON	100K	5%	1/4W	
R1586	1-247-891-00	CARBON	330K	5%	1/4W	
*****						
*A-1346-112-A	D BOARD, COMPLETE		(KV-27TS36/27TS32		/27TS29)	
*****						
*A-1346-129-A	D BOARD, COMPLETE		(KV-32TS46/32TS36)			
*****						
1-533-223-11	CLIP, FUSE					
4-382-854-11	SCREW (M3X10), P, SW (+)					
<CAPACITOR>						
C501	1-124-557-11	ELECT	1000MF	20%	25V	
C502	1-162-131-11	CERAMIC	220PF	10%	2KV	
C503	1-124-557-11	ELECT	1000MF	20%	25V	
C504	1-137-366-11	FILM	0.0022MF	5%	50V	
C505	1-124-916-11	ELECT	22MF	20%	25V	
C506	1-124-929-11	ELECT	22MF	20%	100V	
C507	1-124-046-00	ELECT	10MF	20%	160V	
C509	1-124-916-11	ELECT	22MF	20%	25V	
C511	1-123-024-21	ELECT	33MF		160V	
C512	1-102-212-00	CERAMIC	820PF	10%	500V	
C513	1-102-212-00	CERAMIC	820PF	10%	500V	
C514	1-102-244-00	CERAMIC	220PF	10%	500V	
C515	1-137-416-11	FILM	0.01MF	10%	100V	
C517	1-162-116-00	CERAMIC	680PF	10%	2KV	
C518	1-162-116-00	CERAMIC	680PF	10%	2KV	
C519	1-137-024-11	FILM	0.02MF	3%	2KV	
C520	1-162-134-91	CERAMIC	470PF	10%	2KV	
C521	1-136-316-51	FILM	0.056MF	5%	630V	
C522	1-106-383-00	MYLAR	0.047MF	99%	200V	
C523	1-102-002-00	CERAMIC	680PF	10%	500V	

REF. NO.	PART NO.	DESCRIPTION	REMARK
C524	1-102-212-00	CERAMIC 820PF 10% 500V	
C525	1-124-902-00	ELECT 0.47MF 20% 50V	
C526	1-106-395-00	MYLAR 0.15MF 10% 200V	
C527	1-124-341-00	ELECT 1MF 20% 200V	
C528	1-136-113-00	FILM 2MF 5% 200V	
C529	1-137-410-11	FILM 0.001MF 10% 100V	
C530	1-104-770-11	FILM 0.62MF 5% 200V	
C530	1-104-844-11	CAP, FILM (S) 0.62MF	
C531	1-124-477-11	ELECT 47MF 20% 25V	
C532	1-136-165-00	FILM 0.1MF 5% 50V	
C533	1-124-927-11	ELECT 4.7MF 20% 50V	
C534	1-136-161-00	FILM 0.047MF 5% 50V	
C535	1-124-911-11	ELECT 220MF 20% 50V	
C536	1-137-421-91	FILM 0.068MF 10% 100V	
C538	1-136-161-00	FILM 0.047MF 5% 50V	
C540	1-137-366-11	FILM 0.0022MF 5% 50V	
C541	1-137-366-11	FILM 0.0022MF 5% 50V	
C542	1-130-481-00	FILM 0.0068MF 5% 50V	
C545	1-124-927-11	ELECT 4.7MF 20% 50V	
C547	1-164-079-11	CERAMIC 330PF 10% 50V	
C548 $\Delta$	1-162-116-91	CERAMIC 680PF 10% 2KV	
C550	1-106-387-00	MYLAR 0.068MF 10% 200V	
C553	1-164-079-11	CERAMIC 330PF 10% 50V	
C561	1-162-815-11	CERAMIC 47PF 5% 500V	
C595	1-123-932-00	ELECT 4.7MF 20% 160V	
C598	1-124-342-00	ELECT 3.3MF 20% 160V	
C600	1-124-907-11	ELECT 10MF 20% 50V	
C601 $\Delta$	1-136-311-51	FILM 0.47MF 20% 125V	
C602 $\Delta$	1-136-311-51	FILM 0.47MF 20% 125V	
C603 $\Delta$	1-136-311-51	FILM 0.47MF 20% 125V	
C604 $\Delta$	1-162-578-81	CERAMIC 0.0047MF 20% 400V	
C607	1-104-757-11	ELECT 470MF 20% 200V	
C608	1-104-757-11	ELECT 470MF 20% 200V	
C609	1-136-169-00	FILM 0.22MF 5% 50V	
C610	1-136-169-00	FILM 0.22MF 5% 50V	
C611	1-136-169-00	FILM 0.22MF 5% 50V	
C612	1-136-169-00	FILM 0.22MF 5% 50V	
C613	1-164-625-11	CERAMIC 680PF 10% 500V	
C614	1-164-625-11	CERAMIC 680PF 10% 500V	
C616	1-124-907-11	ELECT 10MF 20% 50V	
C617	1-124-618-11	ELECT 2200MF 20% 35V	
C618	1-124-557-11	ELECT 1000MF 20% 25V	
C619	1-124-360-00	ELECT 1000MF 20% 16V	
C620	1-164-644-11	CERAMIC 330PF 10% 500V	
C621	1-126-356-11	ELECT 220MF 20% 160V	
C623	1-162-117-00	CERAMIC 100PF 10% 500V	
C624	1-136-487-81	FILM 0.015MF 5% 50V	
C625	1-129-744-91	FILM 0.027MF 10% 400V	
C626	1-124-478-11	ELECT 100MF 20% 25V	
C627	1-124-443-00	ELECT 100MF 20% 10V	
C628 $\Delta$	1-164-497-51	CERAMIC 470PF 20% 400V	
C634	1-165-127-11	CERAMIC 470PF 10% 500V	
C635	1-124-477-11	ELECT 47MF 20% 16V	
C636	1-137-374-11	FILM 0.047MF 5% 50V	
C637	1-124-916-11	ELECT 22MF 20% 25V	
C640	1-124-902-00	ELECT 0.47MF 20% 50V	
C641	1-124-443-00	ELECT 100MF 20% 10V	
C642	1-137-217-11	FILM 0.01MF 5% 1.25KV	
C643	1-137-218-11	FILM 0.012MF 5% 1.25KV	
C645	1-102-125-00	CERAMIC 0.0047MF 10% 50V	
C646	1-126-101-11	ELECT 100MF 20% 16V	
C647	1-124-916-11	ELECT 22MF 20% 25V	
C684	1-124-907-11	ELECT 10MF 20% 50V	



## KV-27TS29/27TS32/27TS36

RM-Y116 RM-Y117 RM-Y118

## KV-32TS36/32TS46

RM-Y118 RM-Y118  
SA-W200

D

Les composants identifiés par une  
trame et une marque  $\Delta$  sont  
critiques pour la sécurité.  
Ne les remplacer que par une pièce  
portant le numéro spécifié.

The components identified by  
shading and mark  $\Delta$  are critical  
for safety.  
Replace only with part number  
specified.

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
C695	1-124-907-11	ELECT	10MF 20% 50V	D622	8-719-911-19	DIODE 1SS119	
C2205	1-124-925-11	ELECT	2.2MF 20% 50V	D623	8-719-911-19	DIODE 1SS119	
C2208	1-124-925-11	ELECT	2.2MF 20% 50V	D624	8-719-911-19	DIODE 1SS119	
C2210	1-124-120-11	ELECT	220MF 20% 25V	D626	8-719-510-48	DIODE D1N20R	
C2211	1-124-477-11	ELECT	47MF 20% 25V	D627	8-719-510-48	DIODE D1N20R	
C2212	1-124-120-11	ELECT	220MF 20% 25V	D628	8-719-911-19	DIODE 1SS119	
C2213	1-136-173-00	FILM	0.47MF 5% 50V	D633	8-719-110-09	DIODE RD8.2ESB3	
C2215	1-136-169-00	FILM	0.22MF 5% 50V	D634	8-719-911-19	DIODE 1SS119	
C2216	1-124-480-11	ELECT	470MF 20% 25V	D635	8-719-911-19	DIODE 1SS119	
C2217	1-136-169-00	FILM	0.22MF 5% 50V	D636	8-719-510-48	DIODE D1N20R	
C2218	1-124-557-11	ELECT	1000MF 20% 25V	D637	8-719-911-19	DIODE 1SS119	
C2219	1-124-557-11	ELECT	1000MF 20% 25V	D638	8-719-911-19	DIODE 1SS119	
C2220	1-124-925-11	ELECT	2.2MF 20% 50V				
<CONNECTOR>				<FUSE>			
CN104	*1-573-979-11	CONNECTOR, BOARD TO BOARD 11P		F601	$\Delta$ 1-532-748-11	FUSE, GLASS TUBE (6.3A/125V)	
CN105	*1-508-768-00	PIN, CONNECTOR (5MM PITCH) 6P					
CN107	*1-580-798-11	CONNECTOR PIN (DY) 6P		<FERRITE BEAD>			
CN108	1-573-296-11	CONNECTOR, BOARD TO BOARD 10P (KV-32TS46/32TS36)		FB501	1-412-911-11	INDUCTOR, FERRITE BEAD	
CN109	1-573-296-11	CONNECTOR, BOARD TO BOARD 10P (KV-32TS46/32TS36)		FB502	1-412-911-11	INDUCTOR, FERRITE BEAD	
CN112	*1-508-786-00	PIN, CONNECTOR (5MM PITCH) 2P		FB601	1-412-911-11	INDUCTOR, FERRITE BEAD	
CN113	*1-508-765-00	PIN, CONNECTOR (5MM PITCH) 3P		FB602	1-412-911-11	INDUCTOR, FERRITE BEAD	
CN114	*1-580-843-11	PIN, CONNECTOR (POWER)		FB603	1-412-911-11	INDUCTOR, FERRITE BEAD	
CN115	1-573-298-11	CONNECTOR, BOARD TO BOARD 20P		FB604	1-412-911-11	INDUCTOR, FERRITE BEAD	
CN116	*1-691-616-11	CONNECTOR, BOARD TO BOARD 15P		FB605	1-412-911-11	INDUCTOR, FERRITE BEAD	
CN117	*1-573-978-11	CONNECTOR, BOARD TO BOARD 11P		FB606	1-412-911-11	INDUCTOR, FERRITE BEAD	
				FB613	1-412-911-11	INDUCTOR, FERRITE BEAD	
				FB614	1-412-911-11	INDUCTOR, FERRITE BEAD	
<DIODE>				<IC>			
D501	8-719-976-64	DIODE RGP02-17		IC501	8-759-980-58	IC TDA8172	
D502	8-719-979-85	DIODE EGP20G		IC504	8-759-103-93	IC UPC393C	
D503	8-719-979-85	DIODE EGP20G					
D504	$\Delta$ 8-719-302-44	DIODE EL1Z-V1		<POWER MODULE>			
D505	8-719-936-84	DIODE RGP10GPKG3		IC601	$\Delta$ 1-810-051-11	POWER MODULE DM-48	
D506	8-719-945-80	DIODE ERC06-15S					
D507	8-719-945-80	DIODE ERC06-15S		<IC>			
D508	8-719-900-26	DIODE ERD29-08J		IC602	8-759-805-37	IC L78LR05D-MA	
D509	8-719-936-84	DIODE RGP10GPKG3		IC604	8-759-924-12	IC LM7805CT	
D510	8-719-908-03	DIODE GP08D		IC605	8-759-701-79	IC LM7812CT	
D511	8-719-908-03	DIODE GP08D		IC606	8-759-982-10	IC RC7809FA	
D512	8-719-109-84	DIODE RD5.1ESB1		IC610	8-759-150-61	IC UPC78L05T	
D513	8-719-908-03	DIODE GP08D		IC2200	8-759-980-43	IC TDA2009A	
D514	8-719-911-19	DIODE 1SS119					
D515	8-719-911-19	DIODE 1SS119		<COIL>			
D601	8-719-911-19	DIODE 1SS119		L502	1-421-465-00	COIL, FERRITE CHOKE 68UH	
D602	$\Delta$ 8-719-510-63	DIODE D4SB60L-F		L503	1-412-524-11	INDUCTOR 8.2UH	
D603	8-719-500-69	DIODE S3V10SS		L504	1-410-669-31	INDUCTOR 33UH	
D605	8-719-500-69	DIODE S3V10SS		L505	1-459-104-00	COIL, WITH CORE	
D607	8-719-510-02	DIODE D1NS4		L506	1-422-613-11	COIL, AIR CORE	
D608	8-719-510-02	DIODE D1NS4		L508	1-412-553-11	INDUCTOR 3.3MMH	
D609	8-719-510-02	DIODE D1NS4		L509	$\Delta$ 1-460-173-21	COIL, HORIZONTAL LINEARITY (HLC)	
D610	8-719-510-02	DIODE D1NS4		L510	1-406-607-11	COIL, CHOKE 15MMH	
D611	8-719-510-02	DIODE D1NS4		L513	1-412-524-11	INDUCTOR 8.2UH	
D612	8-719-031-80	DIODE D5SC4MR					
D613	8-719-022-97	DIODE D2S4MF					
D614	8-719-110-33	DIODE RD12ESB3					
D615	8-719-027-43	DIODE S2L20UF					
D616	8-719-027-43	DIODE S2L20UF					
D617	8-719-027-43	DIODE S2L20UF					
D618	8-719-027-43	DIODE S2L20UF					
D619	8-719-510-02	DIODE D1NS4					



The components identified by shading and mark  $\Delta$  are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque  $\Delta$  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

The components identified by  $\Delta$  in this manual have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used.

KV-27TS29/27TS32/27TS36

RM-Y116 RM-Y117 RM-Y118

KV-32TS36/32TS46

RM-Y116 RM-Y118 SA-W200

D

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
<PROTECTOR MODULE>				R547	1-247-883-00	CARBON 150K 5%	1/4W
PM501	1-810-061-11	PROTECTOR MODULE PM-39		R550	1-249-429-11	CARBON 10K 5%	1/4W
		(KV-27TS36/27TS32/27TS29)		R551	1-249-429-11	CARBON 10K 5%	1/4W
PM501	1-810-061-21	PROTECTOR MODULE PM-39		R554	1-216-371-00	METAL OXIDE 1.5 5%	2W F
		(KV-32TS46/32TS36)		R556	1-249-411-11	CARBON 330 5%	1/4W
				R557	1-249-415-11	CARBON 680 5%	1/4W F
<IC LINK>				R561	1-249-429-11	CARBON 10K 5%	1/4W
PS2201A1	1-532-675-91	LINK, IC		R562	1-215-437-00	METAL 4.7K 1%	1/4W
				R563	1-249-429-11	CARBON 10K 5%	1/4W
				R564	1-249-433-11	CARBON 22K 5%	1/4W
				R566	1-249-435-11	CARBON 33K 5%	1/4W
<TRANSISTOR>				R580	1-249-411-11	CARBON 330 5%	1/4W
Q502	8-729-119-80	TRANSISTOR 2SC2688-LK		R601 $\Delta$	1-202-888-91	SOLID 2.2M 20%	1/2W
Q503	8-729-809-29	TRANSISTOR 2SC4159-E		R602 $\Delta$	1-202-888-91	SOLID 2.2M 20%	1/2W
Q505	8-729-119-78	TRANSISTOR 2SC2785-HFE		R603	1-249-419-11	CARBON 1.5K 5%	1/4W
Q591	8-729-016-32	TRANSISTOR 2SC4927-01		R605	1-247-893-11	CARBON 390K 5%	1/4W
Q601	8-729-019-51	TRANSISTOR 2SC4834MNP		R606	1-247-893-11	CARBON 390K 5%	1/4W
Q602	8-729-019-51	TRANSISTOR 2SC4834MNP		R607 $\Delta$	1-202-933-61	FUSIBLE 0.1 10%	1/2W F
Q603	8-729-119-76	TRANSISTOR 2SA1175-HFE		R608	1-215-860-11	METAL OXIDE 33 5%	1W F
Q604	8-729-119-78	TRANSISTOR 2SC2785-HFE		R609	1-216-352-11	METAL OXIDE 1.8 5%	1W F
Q605	8-729-119-78	TRANSISTOR 2SC2785-HFE		R610	1-216-352-11	METAL OXIDE 1.8 5%	1W F
Q611	8-729-119-78	TRANSISTOR 2SC2785-HFE		R611	1-216-468-91	METAL OXIDE 82K 5%	2W F
Q613	8-729-924-90	TRANSISTOR 2SB1370-EF		R612	1-216-468-91	METAL OXIDE 82K 5%	2W F
Q614	8-729-119-78	TRANSISTOR 2SC2785-HFE		R613	1-215-860-11	METAL OXIDE 33 5%	1W F
Q2202	8-729-119-78	TRANSISTOR 2SC2785-HFE		R614	1-215-860-11	METAL OXIDE 33 5%	1W F
Q2203	8-729-119-76	TRANSISTOR 2SA1175-HFE		R615	1-249-421-11	CARBON 2.2K 5%	1/4W
<RESISTOR>				R616	1-249-417-11	CARBON 1K 5%	1/4W
R501	1-249-378-11	CARBON 0.56 5%	1/4W F	R617	1-249-377-11	CARBON 0.47 5%	1/4W F
R503	1-215-862-11	METAL OXIDE 68 5%	1W F	R618	1-249-377-11	CARBON 0.47 5%	1/4W F
R504	1-215-872-11	METAL OXIDE 3.3K 5%	1W F	R619	1-249-377-11	CARBON 0.47 5%	1/4W F
R505	1-249-377-11	CARBON 0.47 5%	1/4W F	R621	1-249-377-11	CARBON 0.47 5%	1/4W F
R506	1-215-886-11	METAL OXIDE 100 5%	2W F	R622	1-249-377-11	CARBON 0.47 5%	1/4W F
R507	1-249-429-11	CARBON 10K 5%	1/4W	R623	1-249-377-11	CARBON 0.47 5%	1/4W F
R508	1-249-425-11	CARBON 4.7K 5%	1/4W	R624	1-249-377-11	CARBON 0.47 5%	1/4W F
R509	1-249-389-11	CARBON 4.7 5%	1/4W F	R625	1-249-377-11	CARBON 0.47 5%	1/4W F
$\Delta$ R511 $\Delta$		CARBON	1/4W	R627	1-249-377-11	CARBON 0.47 5%	1/4W F
R512	1-249-389-11	CARBON 4.7 5%	1/4W F	R628	1-249-377-11	CARBON 0.47 5%	1/4W F
R513	1-216-393-00	METAL OXIDE 2.2 5%	3W F	R629	1-249-388-11	CARBON 3.9 5%	1/4W F
R514	1-249-429-11	CARBON 10K 5%	1/4W	R630	1-215-857-11	METAL OXIDE 10 5%	1W F
R515	1-216-363-00	METAL OXIDE 0.33 5%	2W F	R632	1-249-417-11	CARBON 1K 5%	1/4W F
R516	1-249-401-11	CARBON 47 5%	1/4W	R633	1-249-405-11	CARBON 100 5%	1/4W F
R517	1-215-916-00	METAL OXIDE 680 5%	3W F	R635	1-249-413-11	CARBON 470 5%	1/4W F
R518	1-215-916-00	METAL OXIDE 680 5%	3W F	R636	1-249-383-11	CARBON 1.5 5%	1/4W F
R519	1-249-426-11	CARBON 5.6K 5%	1/4W	R637	1-249-421-11	CARBON 2.2K 5%	1/4W
R520	1-249-423-11	CARBON 3.3K 5%	1/4W	R638	1-249-423-11	CARBON 3.3K 5%	1/4W
R521	1-249-411-11	CARBON 330 5%	1/4W	R639	1-249-423-11	CARBON 3.3K 5%	1/4W
R522	1-215-886-11	METAL OXIDE 100 5%	2W F	R640 $\Delta$	1-202-893-91	SOLID 8.2M 20%	1/2W
R523	1-215-862-11	METAL OXIDE 68 5%	1W F	R643	1-216-379-11	METAL OXIDE 6.8 5%	2W F
$\Delta$ R524 $\Delta$		CARBON	1/4W	R644 $\Delta$	1-212-853-61	FUSIBLE 6.8 5%	1/4W F
R526	1-247-887-00	CARBON 220K 5%	1/4W	R645	1-249-377-11	CARBON 0.47 5%	1/4W F
R527	1-215-861-00	METAL OXIDE 47 5%	1W F	R646	1-249-429-11	CARBON 10K 5%	1/4W
R528	1-260-326-71	CARBON 680 5%	1/2W	R647	1-249-433-11	CARBON 22K 5%	1/4W
R530	1-215-445-00	METAL 10K 1%	1/4W	R648	1-249-414-11	CARBON 560 5%	1/4W
R531	1-247-903-91	CARBON 1M 5%	1/4W	R649	1-216-431-11	METAL OXIDE 560 5%	1W F
R532	1-215-446-00	METAL 11K 1%	1/4W	R650	1-249-405-11	CARBON 100 5%	1/4W F
R534	1-249-385-11	CARBON 2.2 5%	1/4W F	R651 $\Delta$	1-212-954-61	FUSIBLE 6.8 5%	1/2W F
R535	1-216-453-00	METAL OXIDE 270 5%	2W F	R652 $\Delta$	1-212-954-61	FUSIBLE 6.8 5%	1/2W F
R536	1-249-389-11	CARBON 4.7 5%	1/4W F	R653	1-249-381-11	CARBON 1 5%	1/4W
R539	1-215-459-00	METAL 39K 1%	1/4W	R654	1-216-385-11	METAL OXIDE 0.47 5%	3W F
R543	1-249-419-11	CARBON 1.5K 5%	1/4W	R655	1-249-417-11	CARBON 1K 5%	1/4W F
R546	1-249-431-11	CARBON 15K 5%	1/4W	R656	1-249-381-11	CARBON 1 5%	1/4W
				R657	1-249-417-11	CARBON 1K 5%	1/4W
				R658	1-249-389-11	CARBON 4.7 5%	1/4W F



## KV-27TS29/27TS32/27TS36

RM-Y116 RM-Y117 RM-Y118

## KV-32TS36/32TS46

RM-Y118 RM-Y118  
SA-W200

D H

Les composants identifiés par une  
trame et une marque  $\Delta$  sont  
critiques pour la sécurité.  
Ne les remplacer que par une pièce  
portant le numéro spécifié.

The components identified by  
shading and mark  $\Delta$  are critical  
for safety.  
Replace only with part number  
specified.

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
R659	1-247-883-00	CARBON	150K 5% 1/4W	C1002	1-124-903-11	ELECT 1MF 20% 50V (KV-32TS46/32TS36/27TS36/27TS32)	
R660	1-249-435-11	CARBON	22K 5% 1/4W	C1003	1-124-903-11	ELECT 1MF 20% 50V (KV-32TS46/32TS36/27TS36/27TS32)	
R661	1-249-406-11	CARBON	120 5% 1/4W	C1004	1-124-122-11	ELECT 100MF 20% 50V	
R690	1-249-423-11	CARBON	3.3K 5% 1/4W				
R691	1-249-423-11	CARBON	3.3K 5% 1/4W				
R2209	1-249-427-11	CARBON	6.8K 5% 1/4W				
R2210	1-249-435-11	CARBON	33K 5% 1/4W				
R2211	1-249-427-11	CARBON	6.8K 5% 1/4W				
R2212	1-249-435-11	CARBON	33K 5% 1/4W				
R2215	1-249-425-11	CARBON	4.7K 5% 1/4W				
R2216	1-249-437-11	CARBON	47K 5% 1/4W				
R2217	1-249-435-11	CARBON	33K 5% 1/4W				
R2218	1-249-441-11	CARBON	100K 5% 1/4W				
R2219	1-249-413-11	CARBON	470 5% 1/4W				
R2220	1-249-430-11	CARBON	12K 5% 1/4W				
R2221	1-249-430-11	CARBON	12K 5% 1/4W				
R2222	1-249-398-11	CARBON	27 5% 1/4W				
R2223	1-249-418-11	CARBON	1.2K 5% 1/4W				
R2224	1-249-418-11	CARBON	1.2K 5% 1/4W				
R2225	1-249-398-11	CARBON	27 5% 1/4W				
R2226	1-249-385-11	CARBON	2.2 5% 1/4W F				
R2227	1-249-385-11	CARBON	2.2 5% 1/4W F				
R2228	1-249-421-11	CARBON	2.2K 5% 1/4W				
R2229	1-249-421-11	CARBON	2.2K 5% 1/4W				
		<RELAY>					
RY601A	1-515-684-22	RELAY					
RY602	1-515-516-00	RELAY					
		<SWITCH>					
S501	1-572-707-11	SWITCH, LEVER					
S502	1-572-707-11	SWITCH, LEVER					
		<TRANSFORMER>					
T501	1-453-146-11	TRANSFORMER ASSY, FLYBACK (NX-2604A3)					
T502	1-437-195-14	TRANSFORMER, HORIZONTAL DRIVE (HDT)					
T503	1-424-545-22	TRANSFORMER, FERRITE (PMT)					
T601	1-423-593-11	TRANSFORMER, LINE FILTER (LFT)					
T602	1-424-220-21	TRANSFORMER, LINE FILTER (LFT)					
T603	1-423-563-11	TRANSFORMER, CONVERTER DRIVE (CDT)					
T604	1-423-615-11	TRANSFORMER, CONVERTER (PIT)					
T605	1-423-582-11	TRANSFORMER, FERRITE (SBT)					
		<THERMISTOR>					
THP601A	1-809-539-11	THERMISTOR, POSITIVE					
		<VARISTOR>					
VDR601	1-807-288-11	VARISTOR					
VDR602	1-810-053-21	VARISTOR					
VDR603	1-810-053-21	VARISTOR					
		<CAPACITOR>					
C1001	1-124-916-11	ELECT 22MF 20% 25V (KV-32TS46/32TS36/27TS36/27TS32)					



KV-27TS29/27TS32/27TS36  
RM-Y116 RM-Y117 RM-Y118KV-32TS36/32TS46  
RM-Y116 RM-Y118  
SA-W200

UA

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
*A-1394-415-A	UA BOARD, COMPLETE	(KV-32TS36/27TS36)		CN143	1-750-395-11	SOCKET, CONNECTOR 32P	
*****				CN144	*1-564-521-11	PLUG, CONNECTOR 6P	(KV-32TS46)
*A-1394-435-A	UA BOARD, COMPLETE	(KV-32TS46)		CN146	1-573-300-11	CONNECTOR, BOARD TO BOARD 18P	(KV-32TS46/32TS36/27TS32)
*****							
*A-1394-437-A	UA BOARD, COMPLETE	(KV-27TS29)		CN147	1-750-395-11	SOCKET, CONNECTOR 32P	
*****				CN148	*1-564-517-11	PLUG, CONNECTOR 2P	
*A-1394-441-A	UA BOARD, COMPLETE	(KV-27TS32)		CN149	*1-564-519-11	PLUG, CONNECTOR 4P	(KV-32TS46)
*****							
<CAPACITOR>				<DIODE>			
C401	1-163-031-11	CERAMIC CHIP 0.01MF	50V	D401	8-719-110-17	DIODE RD10ESB2	
		(KV-32TS46/32TS36/27TS32)				(KV-32TS46/32TS36/27TS36/27TS32)	
C402	1-124-916-11	ELECT 22MF	20% 25V	D402	8-719-110-17	DIODE RD10ESB2	
C405	1-124-916-11	ELECT 22MF	20% 25V	D403	8-719-110-17	DIODE RD10ESB2	
		(KV-32TS46/32TS36/27TS32)		D404	8-719-110-17	DIODE RD10ESB2	
C406	1-124-903-11	ELECT 1MF	20% 50V	D405	8-719-110-17	DIODE RD10ESB2	
		(KV-32TS46/32TS36/27TS32)				(KV-32TS46/32TS36/27TS36/27TS32)	
C407	1-124-903-11	ELECT 1MF	20% 50V	D408	8-719-110-17	DIODE RD10ESB2	
		(KV-32TS46/32TS36/27TS32)				(KV-32TS46/32TS36/27TS36/27TS32)	
C408	1-124-916-11	ELECT 22MF	20% 25V	D410	8-719-110-17	DIODE RD10ESB2	
		(KV-32TS46/32TS36/27TS32)		D411	8-719-110-17	DIODE RD10ESB2	
C409	1-124-903-11	ELECT 1MF	20% 50V	D429	8-719-110-17	DIODE RD10ESB2	
C410	1-124-903-11	ELECT 1MF	20% 50V	D430	8-719-110-17	DIODE RD10ESB2	
C411	1-124-478-11	ELECT 100MF	20% 25V	D431	8-719-110-17	DIODE RD10ESB2	
		(KV-27TS32/27TS29)		D436	8-719-110-17	DIODE RD10ESB2	(KV-32TS46/32TS36/27TS36)
C412	1-124-916-11	ELECT 22MF	20% 25V	D437	8-719-110-17	DIODE RD10ESB2	(KV-32TS46/32TS36/27TS36)
C413	1-124-907-11	ELECT 10MF	20% 50V	<IC>			
C414	1-124-499-11	ELECT 1MF	20% 50V	IC401	8-759-634-69	IC M52470P	(KV-27TS32/27TS29)
C415	1-124-499-11	ELECT 1MF	20% 50V	IC402	8-752-062-86	IC CXA1545AS	(KV-32TS46/32TS36/27TS36)
C416	1-124-907-11	ELECT 10MF	20% 50V	IC403	8-759-088-00	IC MM1114XFF	(KV-27TS32)
C417	1-124-902-00	ELECT 0.47MF	20% 50V	IC404	8-759-164-18	IC MM1118XFF	(KV-27TS32)
C418	1-124-902-00	ELECT 0.47MF	20% 50V				
C419	1-124-477-11	ELECT 47MF	20% 16V				
C420	1-163-031-11	CERAMIC CHIP 0.01MF	50V				
		(KV-32TS46/32TS36/27TS32)					
C421	1-124-916-11	ELECT 22MF	20% 25V				
		(KV-32TS46/32TS36/27TS32)					
C430	1-124-499-11	ELECT 1MF	20% 50V	J401	1-750-515-11	TERMINAL BLOCK, S 3P	
						(KV-32TS46/32TS36/27TS36/27TS32)	
C431	1-124-499-11	ELECT 1MF	20% 50V	J401	1-750-517-11	JACK BLOCK, PIN 3P	(KV-27TS29)
				J402	1-750-517-11	JACK BLOCK, PIN 3P	
C432	1-124-916-11	ELECT 22MF	20% 25V			(KV-32TS46/32TS36/27TS36/27TS32)	
C433	1-124-482-11	ELECT 33MF	20% 25V	J403	1-750-516-11	JACK BLOCK, PIN 2P	(KV-27TS29)
		(KV-32TS46/32TS36/27TS32)		J404	1-750-516-11	JACK BLOCK, PIN 2P	
C434	1-163-117-00	CERAMIC CHIP 100PF	5% 50V				
		(KV-32TS46/32TS36/27TS32)					
C440	1-124-907-11	ELECT 10MF	20% 50V				
		(KV-32TS46/32TS36/27TS32)					
C441	1-124-477-11	ELECT 47MF	20% 16V				
C442	1-163-117-00	CERAMIC CHIP 100PF	5% 50V				
		(KV-32TS46/32TS36/27TS32)					
C462	1-126-101-11	ELECT 100MF	20% 16V				
<FILTER BLOCK>							
CM402	1-466-912-21	FILTER BLOCK, COMB					
<CONNECTOR>							
CN141	*1-564-520-11	PLUG, CONNECTOR 5P					
		(KV-32TS46/32TS36/27TS36/27TS32)					



KV-27TS29/27TS32/27TS36

RM-Y116 RM-Y117 RM-Y118

KV-32TS36/32TS46

RM-Y116 RM-Y118  
SA-W200

## (SUPER WOOFER BOARD)

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
*A-1331-264-A SUPER WOOFER BOARD, COMPLETE (KV-32TS46 only)				<IC>			
<CAPACITOR>				IC001	9-904-756-01	IC NJM2068S	
C001	1-102-114-00	CERAMIC	470PF 10% 50V	IC002	9-904-756-01	IC NJM2068S	
C002	1-102-114-00	CERAMIC	470PF 10% 50V	IC003	9-904-756-01	IC NJM2068S	
C003	1-124-903-11	ELECT	1MF 20% 50V	IC004	9-904-757-01	IC M5233L	
C004	1-124-903-11	ELECT	1MF 20% 50V	IC005	9-904-755-01	IC TA8225L(PA10-K)	
C005	1-130-494-11	FILM	0.082MF 5% 50V	<JACK>			
C006	1-130-490-11	FILM	0.039MF 5% 50V	J001	9-904-759-01	RCA JACK	
C007	1-130-494-11	FILM	0.082MF 5% 50V	<TRANSISTOR>			
C008	1-130-490-11	FILM	0.039MF 5% 50V	Q001	8-729-140-96	TRANSISTOR 2SD774-34	
C009	1-124-903-11	ELECT	1MF 20% 50V	Q002	8-729-119-78	TRANSISTOR 2SC2785-HFE	
C010	1-124-903-11	ELECT	1MF 20% 50V	Q003	8-729-119-76	TRANSISTOR 2SA1175-HFE	
C011	1-102-973-00	CERAMIC	100PF 10% 50V	Q004	8-729-119-76	TRANSISTOR 2SA1175-HFE	
C012	1-124-903-11	ELECT	1MF 20% 50V	<RESISTOR>			
C013	1-124-908-00	ELECT	0.47MF 20% 50V	R001	1-249-405-11	CARBON 100 5% 1/4W	
C014	1-124-907-11	ELECT	10MF 20% 50V	R002	1-249-405-11	CARBON 100 5% 1/4W	
C015	1-124-910-11	ELECT	47MF 20% 50V	R003	1-249-426-11	CARBON 56K 5% 1/4W	
C016	1-124-472-11	ELECT	470MF 20% 10V	R004	1-249-426-11	CARBON 56K 5% 1/4W	
C017	1-124-472-11	ELECT	470MF 20% 10V	R005	1-247-862-11	CARBON 20K 5% 1/4W	
C018	1-124-120-11	ELECT	220MF 20% 25V	R006	1-247-862-11	CARBON 20K 5% 1/4W	
C019	1-124-120-11	ELECT	220MF 20% 25V	R007	1-247-862-11	CARBON 20K 5% 1/4W	
C020	1-102-074-00	CERAMIC	0.001MF 10% 50V	R008	1-247-862-11	CARBON 20K 5% 1/4W	
C021	1-130-491-00	FILM	0.047MF 5% 50V	R009	1-247-862-11	CARBON 20K 5% 1/4W	
C022	1-130-491-00	FILM	0.047MF 5% 50V	R010	1-247-862-11	CARBON 20K 5% 1/4W	
C023	1-124-360-00	ELECT	1000MF 20% 16V	R011	1-249-431-11	CARBON 15K 5% 1/4W	
C024	1-124-360-00	ELECT	1000MF 20% 16V	R012	1-249-413-11	CARBON 470 5% 1/4W	
C025	1-124-636-91	ELECT	3300MF 20% 25V	R013	1-247-864-11	CARBON 24K 5% 1/4W	
C026	1-124-472-11	ELECT	470MF 20% 10V	R014	1-247-864-11	CARBON 24K 5% 1/4W	
C027	1-124-472-11	ELECT	470MF 20% 10V	R015	1-247-864-11	CARBON 24K 5% 1/4W	
C028	1-124-472-11	ELECT	470MF 20% 10V	R016	1-247-864-11	CARBON 24K 5% 1/4W	
C029	1-124-907-11	ELECT	10MF 20% 50V	R017	1-249-417-11	CARBON 1K 5% 1/4W	
C030	1-102-129-00	CERAMIC	0.01MF 10% 50V	R018	1-249-429-11	CARBON 10K 5% 1/4W	
<CONNECTOR>				R019	1-247-903-91	CARBON 1M 5% 1/4W	
CN001	9-904-761-01	PIN, TERMINAL		R020	1-249-426-11	CARBON 5.6K 5% 1/4W	
<DIODE>				R021	1-249-417-11	CARBON 1K 5% 1/4W	
D001	9-904-758-01	DIODE RBA-402LF-A		R022	1-249-429-11	CARBON 10K 5% 1/4W	
D002	9-904-765-01	DIODE ERA15-02VH-T		R023	1-249-429-11	CARBON 10K 5% 1/4W	
D003	9-904-766-01	DIODE RD9R1ES(B2)-T		R024	1-249-417-11	CARBON 1K 5% 1/4W	
D004	9-904-766-01	DIODE RD9R1ES(B2)-T		R025	1-247-839-11	CARBON 2.2K 5% 1/4W	
D005	8-719-802-30	DIODE 1SS176		R026	1-249-429-11	CARBON 10K 5% 1/4W	
D006	8-719-802-30	DIODE 1SS176		R027	1-249-417-11	CARBON 1K 5% 1/4W	
				R028	1-247-903-91	CARBON 1M 5% 1/4W	
				R029	1-249-433-11	CARBON 22K 5% 1/4W	
				R030	1-249-440-11	CARBON 82K 5% 1/4W	
				R031	1-249-433-11	CARBON 22K 5% 1/4W	
				R032	1-247-839-11	CARBON 2.2K 5% 1/4W	
				R033	1-249-433-11	CARBON 22K 5% 1/4W	



**KV-27TS29 / 27TS32 / 27TS36**  
RM-Y116 RM-Y117 RM-Y118

**KV-32TS36 / 32TS46**  
RM-Y118 RM-Y118  
SA-W200

## SONY SERVICE MANUAL

### US Model

KV-27TS29 Chassis No. SCC-F84C-A  
KV-27TS32 Chassis No. SCC-F84E-A  
KV-27TS36 Chassis No. SCC-F84D-A  
KV-32TS36 Chassis No. SCC-F84A-A  
KV-32TS46 Chassis No. SCC-F84B-A

### Canadian Model

KV-27TS29 Chassis No. SCC-F85C-A  
KV-27TS36 Chassis No. SCC-F85D-A  
KV-32TS36 Chassis No. SCC-F85A-A  
KV-32TS46 Chassis No. SCC-F85B-A

## CORRECTION-1

Correct the service manual as shown below.  
File this collection with the service manual.

 : Corrected portion

### SECTION 3 SET-UP ADJUSTMENTS (See page 40)




Incorrect	Correct
<b>3-4. G2 (SCREEN) AND WHITE BALANCE ADJUSTMENTS</b>  <b>1. G2 (SCREEN) ADJUSTMENT(RV702)</b> 1. Set the PICTURE and BRIGHTNESS to normal. 2. Confirm G1 voltage is within $30.0 \pm 5V$ . 3. Apply DC voltage of 180V to the cathodes of R, G and B from DC stabilized power source. 4. While watching the picture, adjust the G2 control (RV702) to the just the retrace line disappears.	<b>3-4. G2 (SCREEN) AND WHITE BALANCE ADJUSTMENTS</b>  <b>1. G2 (SCREEN) ADJUSTMENT(RV702)</b> 1. Set the PICTURE and BRIGHTNESS to normal. 2. Confirm G1 voltage is within $30.0 \pm 5V$ . 3. Apply DC voltage of 170V to the cathodes of R, G and B from DC stabilized power source. 4. While watching the picture, adjust the G2 control (RV702) to the just the retrace line disappears.






## SECTION 7 EXPLODED VIEWS

### 7-2. PICTURE TUBE (See page 102)





Incorrect	Correct
63  1-451-275-41 DEFLECTION YOKE (Y34FXA) (KV-27TS36/27TS32/27TS29)	63  1-451-275-41 DEFLECTION YOKE (Y28PFA)  (KV-27TS36/27TS32/27TS29)

## SECTION 8 ELECTRICAL PARTS LIST

### D BOARD (See page 113)

Incorrect	Correct
PM501 1-810-061-11 PROTECTOR MODULE PM-39 (KV-27TS36/27TS32/27TS29)	PM501 1-810-061-11 PROTECTOR MODULE PM-38  (KV-27TS36/27TS32/27TS29)

### MISCELLANEOUS (See page 117)

Incorrect	Correct
 1-451-275-41 DEFLECTION YOKE (Y34FXA) (KV-27TS36/32TS32/27TS29)	 1-451-275-41 DEFLECTION YOKE (Y28PFA)  (KV-27TS36/27TS32/27TS29) 



# KV-27TS29/27TS32/27TS36

RM-Y116

RM-Y117

RM-Y118

# KV-32TS36/32TS46

RM-Y121

RM-Y116

SA-W200

## SONY SERVICE MANUAL SUPPLEMENT-1

**SUBJECT : PARTS CHANGE**

Supplement the service manual as shown below.

File this supplement with the service manual.

### US Model

KV-27TS29 Chassis No. SCC-F84C-A

KV-27TS32 Chassis No. SCC-F84E-A

KV-27TS36 Chassis No. SCC-F84D-A

KV-32TS36 Chassis No. SCC-F84A-A

KV-32TS46 Chassis No. SCC-F84B-A

### Canadian Model

KV-27TS29 Chassis No. SCC-F85C-A

KV-27TS36 Chassis No. SCC-F85D-A

KV-32TS36 Chassis No. SCC-F85A-A

KV-32TS46 Chassis No. SCC-F85B-A

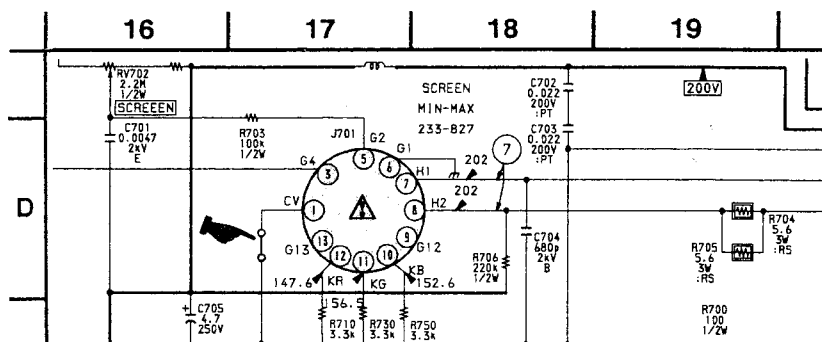
### INTRODUCTION

**PART CHANGE : KV-32TS36/32TS46 only**

### SECTION 6 DIAGRAM

**6-3. PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS (See page 64)**

#### C BOARD



### SECTION 7 EXPLODED VIEW

**7-2. PICTURE TUBE (See page 102)**

REF. NO.	PART. NO.	DESCRIPTION
59	△8-733-734-05	PICTURE TUBE (A80JYV50X) (KV-32TS46/32TS36)
	△8-733-848-05	PICTURE TUBE (A68KZJ50X) (KV-27TS36/27TS32/27TS29)

### SECTION 8 ELECTRICAL PARTS LIST

**MISCELLANEOUS (See page 117)**

REF. NO.	PART. NO.	DESCRIPTION
V901	△8-733-734-05	PICTURE TUBE (A80JYV50X) (KV-32TS36/32TS46)
	△8-733-848-05	PICTURE TUBE (A68KZJ50X) (KV-27TS36/27TS32/27TS29)



9-964-933-81

**Sony Corporation**  
Consumer A&V Products Company  
TV & Display Products Div.

English  
94JE24-93-1  
Printed in Japan  
© 1984. 10



# KV-27TS29/27TS32/27TS36

RM-Y116

RM-Y117

RM-Y118

# KV-32TS36/32TS46

RM-Y118

RM-Y119

SA-W200

## SONY SERVICE MANUAL

### US Model

KV-27TS29 Chassis No. SCC-F84C-A  
KV-27TS32 Chassis No. SCC-F84E-A  
KV-27TS36 Chassis No. SCC-F84D-A  
KV-32TS36 Chassis No. SCC-F84A-A  
KV-32TS46 Chassis No. SCC-F84B-A

## CORRECTION-2

### SUBJECT : PART CHANGE

Correct the service manual as shown below.  
File this collection with the service manual.

### Canadian Model

KV-27TS29 Chassis No. SCC-F85C-A  
KV-27TS36 Chassis No. SCC-F85D-A  
KV-32TS36 Chassis No. SCC-F85A-A  
KV-32TS46 Chassis No. SCC-F85B-A

 : Corrected portion

## SECTION 8 ELECTRICAL PARTS LIST

### D BOARD (See page 112)

Incorrect			Correct		
REF. NO.	PART. NO.	DESCRIPTION	REF. NO.	PART. NO.	DESCRIPTION
D612	8-719-031-80	DIODE D5SC4MR	D612	8-719-031-79	DIODE D5SC4M



9-964-933-92

Sony Corporation  
TV Group

English  
94AE0245-1  
Printed in Japan  
© 1994 1



# KV-27TS29 / 27TS32 / 27TS36

RM-Y116                      RM-Y117                      RM-Y118

# KV-32TS36 / 32TS46

RM-Y118                      RM-Y119  
SA-W200

## SONY SERVICE MANUAL

### US Model

KV-27TS29 Chassis No. SCC-F84C-A  
KV-27TS32 Chassis No. SCC-F84E-A  
KV-27TS36 Chassis No. SCC-F84D-A  
KV-32TS36 Chassis No. SCC-F84A-A  
KV-32TS46 Chassis No. SCC-F84B-A

### Canadian Model

KV-27TS29 Chassis No. SCC-F85C-A  
KV-27TS36 Chassis No. SCC-F85D-A  
KV-32TS36 Chassis No. SCC-F85A-A  
KV-32TS46 Chassis No. SCC-F85B-A

## CORRECTION-3

### SUBJECT : PART CHANGE

Correct the service manual as shown below.  
File this collection with the service manual.

 : Corrected portion

### SECTION 8 ELECTRICAL PARTS LIST D BOARD (See page 112)

Incorrect			Correct		
REF. NO.	PART. NO.	DESCRIPTION	REF. NO.	PART. NO.	DESCRIPTION
IC610	8-759-150-61	IC UPC78L05T	IC610	8-759-708-05	IC NJM78L05A



9-964-933-93

Sony Corporation  
Consumer A&V Products Company  
TV&Display Products Div

English  
94CH02493-1  
Printed in Japan  
© 1994. 7



# SONY<sup>®</sup> SERVICE MANUAL


## AA-1 CHASSIS

MODEL	COMMANDER	DEST.	CHASSIS NO.	MODEL	COMMANDER	DEST.	CHASSIS NO.
KV-27TS29	RM-Y116	US	SCC-F84C-A	KV-32TS36	RM-Y118	US	SCC-F84A-A
KV-27TS29	RM-Y116	Canadian	SCC-F85C-A	KV-32TS36	RM-Y118	Canadian	SCC-F85A-A
KV-27TS32	RM-Y117	US	SCC-F84E-A	KV-32TS46	RM-Y118 SA-W200	US	SCC-F84B-A
KV-27TS36	RM-Y118	US	SCC-F84D-A	KV-32TS46	RM-Y118 SA-W200	Canadian	SCC-F85B-A
KV-27TS36	RM-Y118	Canadian	SCC-F85D-A				


## CORRECTION-4

SUBJECT: ADJUSTMENT CHANGE

File this correction with the Service manual.

 : Corrected portion

### SECTION 3 SET-UP ADJUSTMENT Preparations(See page 35)

INCORRECT	CORRECT
<p>(1) In order to reduce the influence of geomagnetism on the set's picture tube face it east or west.</p> <p>(2) Switch on the set's power and degauss with the degausser.</p>	<p>(1) In order to reduce the influence of geomagnetism on the set's picture tube face it east or west.</p> <p>Note: Please do not use the hand degausser, because the hand degausser effects a spot on a CRT and magnetizes CRT around. </p>



9-964-933-94

※ Please file according to model size. ....

27 34

Sony Corporation  
Consumer A&V Products Company  
TV & Display Products Div.

English  
96BE05 366-1  
Printed in JAPAN  
© 1996.2



## (SUPER WOOFER BOARD)

REF.NO.	PART NO.	DESCRIPTION	REMARK
R034	1-249-429-11	CARBON 10K 5%	1/4W
R035	1-249-429-11	CARBON 10K 5%	1/4W
R036	1-249-433-11	CARBON 22K 5%	1/4W
R037	1-249-417-11	CARBON 1K 5%	1/4W
R038	1-247-866-11	CARBON 30K 5%	1/4W
R039	1-249-405-11	CARBON 100 5%	1/4W
R040	1-247-842-11	CARBON 3K 5%	1/4W
R041	1-249-405-11	CARBON 100 5%	1/4W
R042	1-247-842-11	CARBON 3K 5%	1/4W
R043	9-904-764-01	METAL OXIDE 1 5%	1/2W
R044	9-904-764-01	METAL OXIDE 1 5%	1/2W
R046	9-904-762-01	METAL OXIDE 10 5%	1/4W
R047	9-904-763-01	METAL OXIDE 1.8K 5%	1/2W
R048	1-249-429-11	CARBON 10K 5%	1/4W
R049	1-249-429-11	CARBON 10K 5%	1/4W

## &lt;VARIABLE RESISTOR&gt;

VR001 9-904-760-01 VOLUME

\*\*\*\*\*  
MISCELLANEOUS

\*\*\*\*\*

△ 9-904-750-01 CORD, POWER  
 △ 9-904-753-01 AC OUTLET  
 F001 △ 9-904-752-01 FUSE  
 SP901 9-900-278-01 SPEAKER  
 T901 △ 9-904-751-01 TRANSFORMER, POWER